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The OIL WEEKLY

FOR THE DRILLING, PRODUCING, PIPE LINE INDUSTRY

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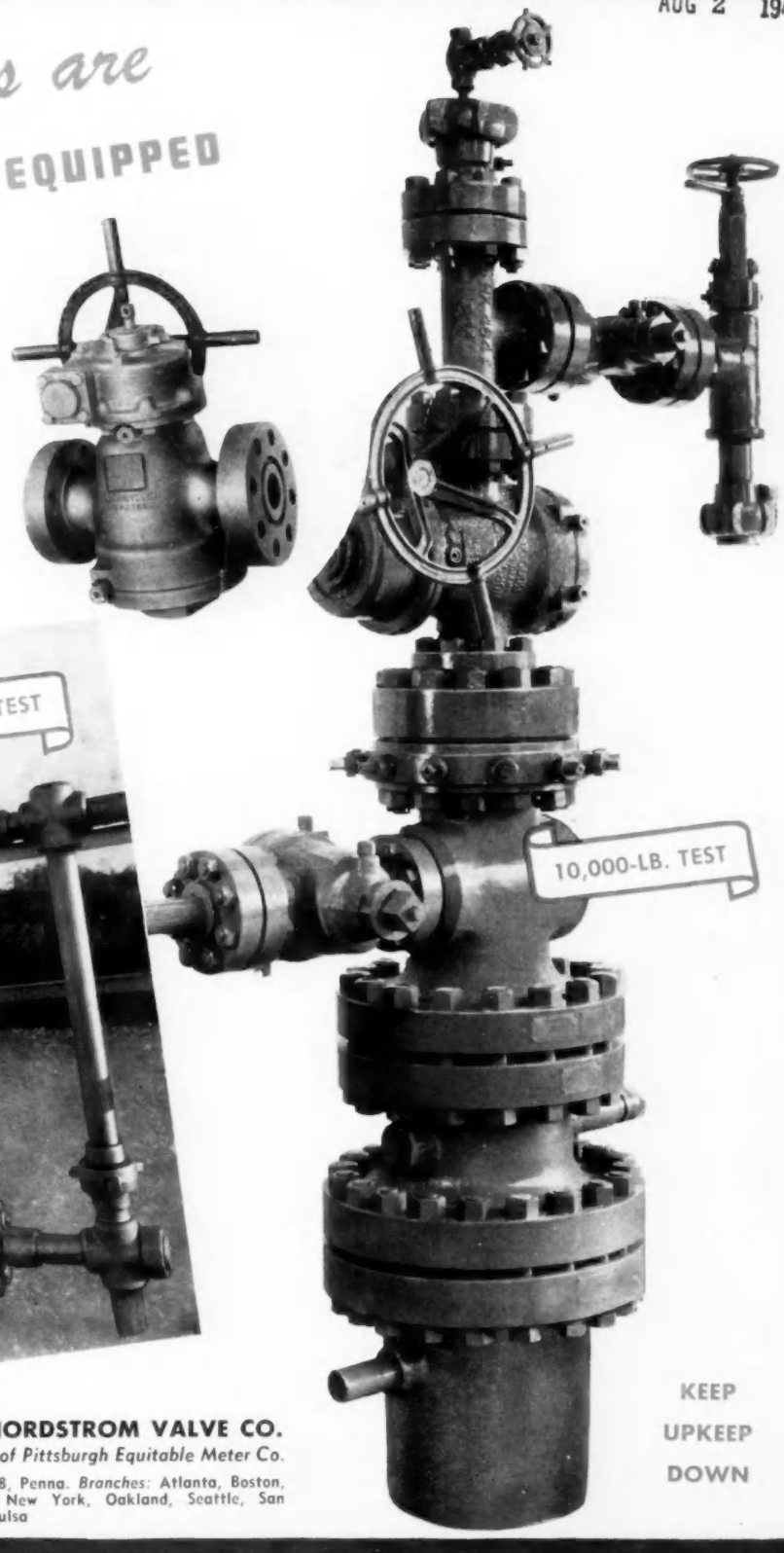

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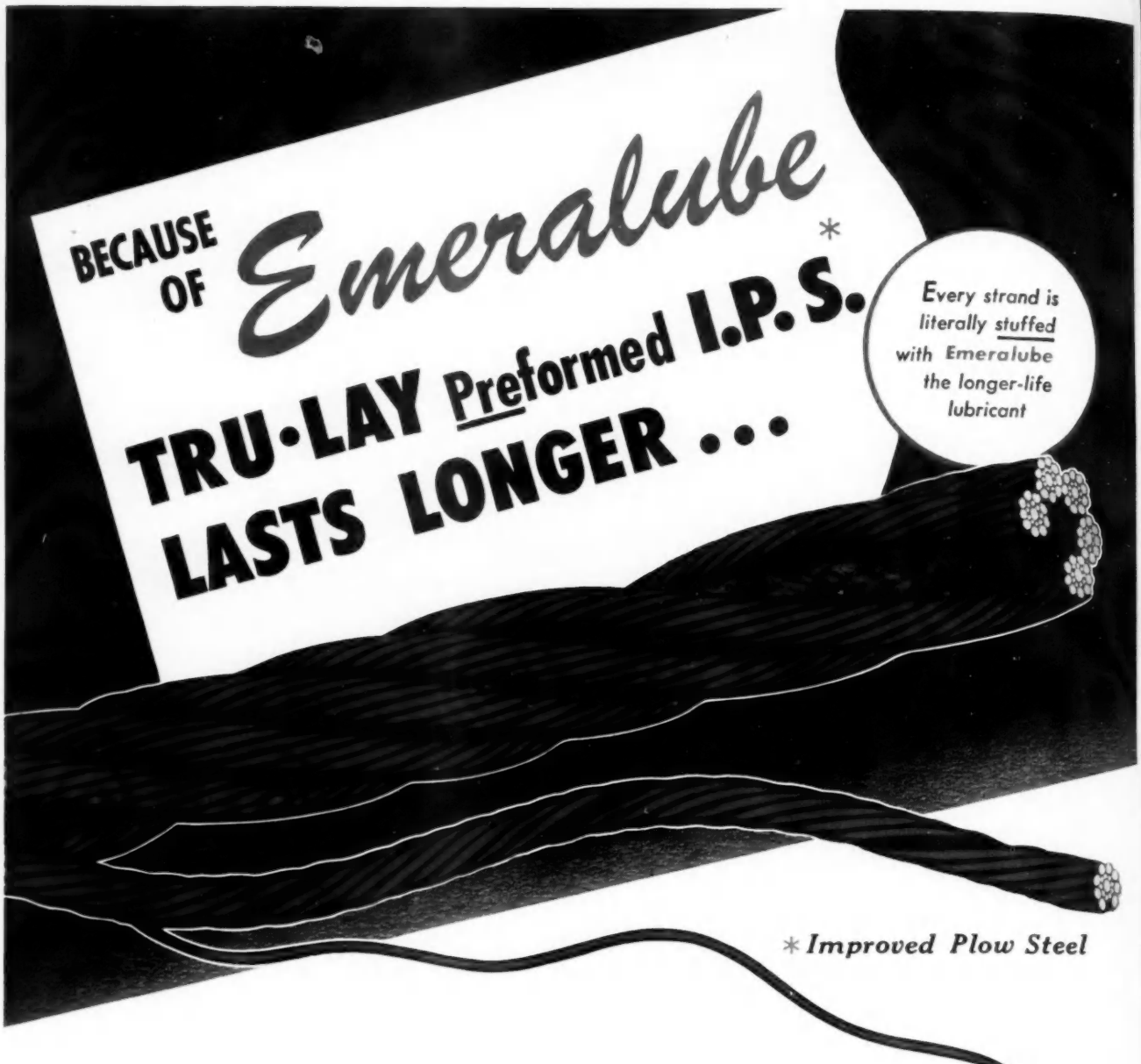
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LOOKING AHEAD
. . . with the Editor

THROUGH research and reservoir study, attempts are constantly being made to learn more about the behavior of oil and gas as they occur in the earth. Notable advances have been made and today the production of both these natural resources is closely tied in with scientific knowledge and its technical application. To realize this one has only to compare the operations of any progressive oil company now, with that of the same organization 10 or 15 years ago. In many companies today all production activities are guided entirely by petroleum engineers, with every operation guided as closely as possible by science.

Secondary recovery, the hope of the industry in the opinion of many engineers, is based almost wholly on research and experiment. Various companies are devoting much time and money to investigating water and dissolved-gas drive to further recovery. It is now generally accepted that water drive is capable of yielding 60 to 80 percent of the original oil in place in most reservoirs. Oil in its underground reservoir is associated with water in many instances. This water is significant in the production of the oil according to the source of supply and the permeability of the surrounding formation.

George R. Elliott, of Phillips Petroleum Company, discusses the behavior and control of natural water-drive reservoirs extensively in a paper which is scheduled for publication in an early issue.

THE OIL WEEKLY

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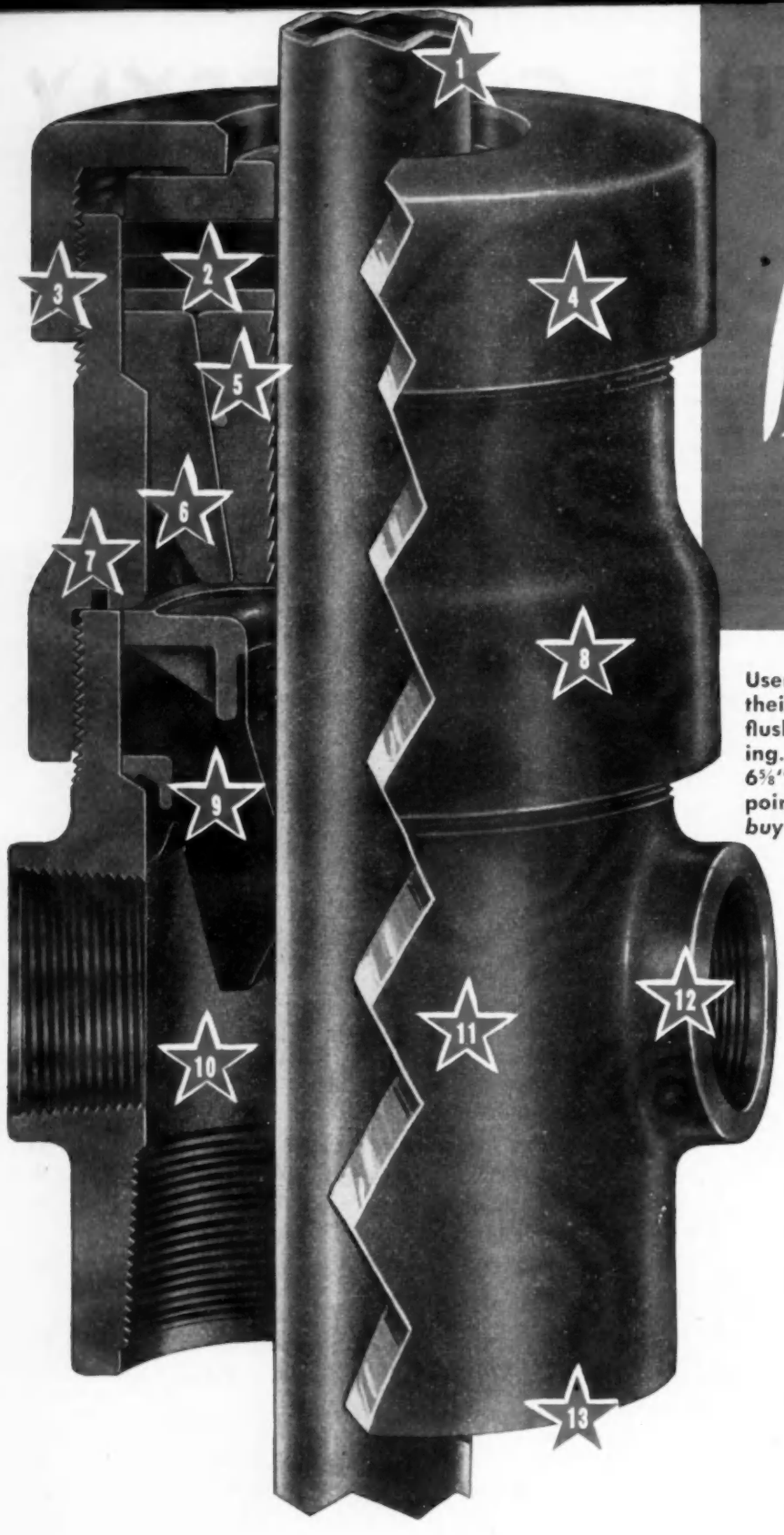

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The Changing Panorama

Oil Not the Basis For ALL the Trouble

A GOOD many of our important headlines concern the Middle East, and not a few of them state outright or imply that this area is a likely trouble spot for a good many years to come. Many of these newspaper stories say without hesitancy that oil is the basis for the probable trouble.

Of course there are various factors that create unrest and confusion in this turbulent region, and the great oil reserves there are bound to come in for their share. However, it is probably true that oil there suffers a larger share of the blame for conditions than it should.

It is quite possible that, if properly handled, the oil reserves can become the strongest stabilizing element in the political and industrial life of the few countries that make the Middle East area.

For instance, as one read "Oil in the Middle East—The Story of Socony-Vacuum's Interest in Iraq," which appears in the *Socony-Vacuum News* for June, he is compelled to feel that Iraq has benefited greatly from development of the oil fields there—and he is inclined to doubt that oil is the basis for all the trouble.

The story of oil in the Middle East is a plain tale that can be simply told. The mystery and intrigue so generally associated with happenings in the Middle East, are not a part of the oil story.

It would be a great help if all the companies interested in this area would publicize their activities as Socony-Vacuum has done. Facts can do much to remove the haze of doubt and suspicion that cling to oil in the Middle East. The facts should be made known and should become an essential part of the program to put oil in the Middle East on the basis that it deserves.

New Synthetic Oil

A NEW lubricant, a synthetic organic chemical containing no petroleum oils with many advantages claimed over mineral oil, has been developed by Union Carbide & Carbon Corporation. It is being produced in commercial quantities but none will be available to any but the military until postwar. Close description of what the new oil is, also is verboten until after V-J day.

The new lubricant is unique in that it keeps its viscosity almost unchanged over a wide range of temperature although it can be compounded to almost any desired viscosity to start with. This will make sure an automobile engine starts and its gears won't stick in sub-zero weather. Also it does not decompose under heat, sludge and varnish formation in engines is eliminated. Tests, according to its manufacturers, have covered 1½ million miles.

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Recording The Driver's Reactions

AS A contribution toward improvement in existing equipment available for testing and training automobile drivers, The Atlantic Refining Company has perfected a Driverater. The machine goes beyond previous devices that register the physical reactions of an automobile driver and makes a record of a motorist's highway attitude and judgment.

The outfit was designed and engineered to fill the requirement that actual road conditions should be simulated, that the person being tested should go through the natural motions of driving a stock model car over a stretch of road presented upon a motion picture screen in full scale and color, and that the driver's reactions to the hazards of the road would be automatically recorded.

During the course of a three-minute ride in the Driverater, seven traffic incidents are presented in color and sound and the reactions of the driver to these incidents are automatically recorded. These recordings are measurements of the driver's attitude to a situation, his split-second reaction time, his recognition and attitude toward potential hazards and his ability to discriminate between the standard traffic colors. The projection and recording instruments are completely flexible, and with very little time and effort the program may be refreshed or changed to meet new conditions.

The outfit has been turned over to the Franklin Institute in Philadelphia, Pennsylvania.

The oil required to fill the tanks of a single battleship would heat the average home for 20 years.

—RALPH K. DAVIES,
Deputy Petroleum Administrator.

Draft on Stocks Despite Big Output

OUTSTANDING economic trend of the first six months of 1945 was the failure of record-breaking production and refining output to prevent a heavy draft on stocks of crude oil and products.

To meet greatly magnified demand, all sources of supply were called upon for larger output than ever before. U. S. production of petroleum liquids averaged 5,125,000 barrels daily, 385,000 barrels above the like period of 1944. Domestic crude oil production was 4,808,000 barrels, up 338,000 barrels. Natural gasoline output was at a new high of 309,000 barrels per day, a gain of 47,000 barrels.

Nevertheless, it also was necessary to draw heavily upon stocks. Stocks of all oils the end of June were about 20 million barrels under a year ago, of which about half came from crude oil inventories. These reductions left stocks of both crude oil and major products at critically low levels.

Drilling operations increased somewhat over 1944 rates, but were still below normal peacetime levels. Noteworthy was an increase in average depth of wells.

This issue of THE OIL WEEKLY is devoted chiefly to midyear statistical data on production, drilling, consumption, wildcatting and other economic factors.

District 3 Status Calls for More Oil

THE United States crude oil supply situation is critical, especially in District 3. Despite record breaking production of crude oil in recent weeks, an extremely heavy draft on crude stocks has occurred in the past six weeks. This has reduced stocks from their highest point of the year to a new 24-year low.

The situation is particularly acute in District 3, because virtually all the reduction in stocks has occurred in this area. Some coastal refiners are experiencing difficulties in maintaining an adequate supply to keep their plants operating. Crude oil production of the region must be increased, or the district is faced with the necessity of either reducing its crude runs to stills or of curtailing its shipments to Districts 1 and 2. Since the latter two operations would lower needed refinery product output, an increase in production seems more desirable.

United States crude oil stocks have declined from 224 million to 216¼ million between June 2 and July 14, a drop of 7¾ million barrels. This is the lowest level since late 1921.

District 3 crude stocks have accounted for 7 million of this decline in dropping from 108 million to 101 million barrels.

Demand for Oils Higher Than

By L. J. LOGAN

FOLLOWING last year's record-breaking operations in meeting similarly great demand for petroleum products, the industry this year has further increased the production, processing, and distribution of oils, and again will set new records in most categories for 1945.

In the first half of this year the total demand for all oils not counting imports averaged 5,261,000 barrels daily, an increase of 9.6 percent over the 4,800,000 daily needed in the six months of 1944. Inclusive of imports, the increase in demand over last year probably would be above 10 percent, for imports are running higher than last year. United States imports are mostly crude oil and fuel oils, and although figures on receipts are censored, it is understood that crude imports have been running around 175,000 barrels daily this year against about 125,000 barrels daily average in 1944, while imports of fuel oils probably have been of similar proportions to those of crude.

It is indicated, therefore, that total demand for all oils, as measured by domestic production of crude oil and other petroleum liquids, changes in stocks, and minimum probable imports, averaged around 5,550,000 barrels daily for the first six months of 1945, or on the basis of over 2,000,000,000 barrels annually for the first time in history. For the whole year 1944 total demand was 1,879,264,000 barrels, having averaged 5,135,000 barrels daily (Bureau of Mines data).

Demand Soars

The great magnitude of this year's indicated demand for all oils, at about 2 billion barrels annually or 5,500,000 barrels daily, is emphasized when it is considered that requirements were only around 1 billion barrels annually or 2,750,000 daily as recently as 1933 and 1934. There has been a doubling of demand in about 12 years.

In meeting this year's unprecedented demand, all sources of new supply have been called upon for more oils, including United States fields producing crude oil and those yielding natural gasoline and also foreign fields, while it has been necessary, additionally, to draw heavily on stocks, representing previously accumulated oils. At the middle of the year stocks of all oils totaled about 452,000,000 barrels, lowest level since 1923 and down 25,000,000 barrels from the beginning of this year.

Domestic production of all oils averaged 5,125,000 barrels daily in the first half of this year, an increase of 8.1 percent over the 4,739,000 daily in the like period last year. In the initial half of

U. S. Crude Oil Production, by States and Districts, June and First 6 Months, 1941, 1944, and 1945

From U. S. Bureau of Mines, except May and June, 1945, estimated from A.P.I. weekly reports

(THOUSANDS OF BARRELS)

State or District	MONTH TOTAL, JUNE				DAILY AVERAGE IN JUNE			FIRST 6 MONTHS OF YAER			
	1941	1944	1945	% Diff. '44-'45	1941	1944	1945	1941	1944	1945	% Diff. '44-'45
Alabama	.....	4	21	+ 425.0	.....	.1	.7	.....	8	76	+ 850.0
Arkansas	2,163	2,426	2,383	— 1.8	72.1	80.9	79.4	12,846	14,579	14,481	— .7
California	19,168	25,438	28.351	+ 11.4	638.9	847.9	945.0	111,849	151,049	165,714	+ 9.7
San Joaquin Val.	7,863	11,771	14,151	+ 20.2	262.1	392.4	471.7	45,096	70,450	82,603	+ 3.1
Coastal District	2,618	4,270	4,600	+ 7.7	87.3	142.3	153.3	15,336	23,591	26,875	+ 13.9
L. A. Basin	8,687	9,397	9,600	+ 2.1	289.5	313.2	320.0	51,417	57,008	56,236	+ 1.4
Colorado	195	232	336	+ 44.8	6.5	7.7	11.2	918	1,354	1,777	+ 31.2
Florida	.....	1	1	.....	.....	.0	.0	.....	8	7	— 12.5
Illinois	10,302	6,263	6,145	— 1.9	343.4	208.8	204.8	59,938	39,095	37,028	— 5.3
Indiana	644	408	366	— 10.3	21.5	13.6	12.2	3,752	2,559	2,264	— 11.5
Kansas	6,886	8,310	8,042	— 3.2	229.5	277.0	268.1	37,655	49,553	48,466	— 2.2
Kentucky	385	759	896	+ 18.0	12.8	25.3	29.9	2,420	4,232	4,950	+ 16.9
Louisiana	9,632	10,626	11,047	+ 4.0	321.1	354.2	368.2	55,252	64,285	64,810	+ .8
North	2,004	1,980	2,077	+ 4.9	66.8	66.0	69.2	12,285	12,079	11,852	— 1.9
South	7,628	8,646	8,970	+ 3.7	254.3	288.2	299.0	42,967	52,206	52,968	+ 1.5
Michigan	1,168	1,508	1,445	— 4.2	38.9	50.3	48.2	6,962	9,445	8,627	— 8.7
Mississippi	858	1,295	1,542	+ 19.1	28.6	43.2	51.4	4,253	7,667	9,199	+ 20.0
Missouri	4	3	4	+ 33.3	.1	.1	.2	23	18	22	+ 22.2
Montana	617	710	608	— 14.4	20.6	23.7	20.3	3,575	4,337	4,017	— 7.4
Nebraska	134	34	27	— 2.1	4.5	1.1	.9	734	208	159	— 23.5
New Mexico	3,292	3,165	3,113	— 1.6	109.7	105.5	103.8	19,177	20,284	18,879	— 6.9
New York	422	402	382	— 5.0	14.1	13.4	12.7	2,499	2,363	2,228	— 5.7
Ohio	297	247	233	— 5.7	9.9	8.2	7.8	1,697	1,500	1,385	— 7.7
Oklahoma	12,651	9,984	11,597	+ 16.2	421.7	332.8	386.6	75,747	60,703	67,675	+ 1.1
Pennsylvania	1,345	1,206	1,043	— 13.5	44.8	40.2	34.7	8,117	7,296	6,212	— 14.8
Tennessee	1	1	1	.....	.0	.0	.0	6	6	6	.....
*Texas	41,928	61,403	65,405	+ 6.5	1,397.6	2,046.8	2,180.2	242,286	355,771	392,331	+ 10.3
East Texas Field	11,053	10,822	11,332	+ 4.7	368.4	360.8	377.7	66,273	66,959	69,123	+ 3.2
Rest of E. Texas	2,401	4,336	4,194	— 3.3	80.0	144.5	139.8	14,022	22,930	25,865	+ 12.8
North Texas	3,929	4,479	4,638	+ 3.5	131.0	149.3	154.6	23,579	26,195	27,091	+ 3.4
West Texas	7,780	13,405	14,922	+ 11.3	259.3	446.8	497.4	42,866	70,257	87,713	+ 24.8
Tex. Panhandle	2,353	2,763	2,700	— 2.3	78.4	92.1	90.0	13,674	17,173	16,139	— 6.0
Upper T. Coast	8,285	15,839	16,892	+ 6.6	276.2	528.0	563.1	46,579	94,571	101,573	+ 7.4
S. Tex Total	6,257	9,378	10,727	+ 14.4	208.6	312.6	357.6	36,387	54,194	63,527	+ 17.2
Lwr. Coast	3,464	6,465	.....	.....	115.5	215.5	.....	20,037	36,645	.....	.....
S. W. Texas	2,168	2,322	.....	.....	72.3	77.4	.....	12,671	13,942	.....	.....
S. Cent. Tex.	625	591	.....	.....	20.8	19.7	.....	3,679	3,607	.....	.....
Utah	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
West Virginia	280	258	236	— 8.5	9.4	8.6	7.9	1,681	1,570	1,463	— 6.8
Wyoming	2,482	2,568	3,252	+ 26.6	82.8	85.6	108.4	14,709	15,667	18,538	+ 18.3
Total U.S.	114,854	137,251	146,476	+ 6.7	3,828.5	4,575.0	4,882.6	666,098	813,557	870,314	+ 7.0

* Texas data by districts based on A.P.I., and so do not agree exactly with state total, which is on Bureau of Mines basis.

10 Percent Last Year

Associate Editor

1941, last prewar year for the United States, domestic output averaged only 3,896,000 barrels daily. The increase for natural gasoline was sharper than that for crued oil. The domestic production of crude averaged 4,808,000 barrels daily, an increase of 7:5 percent over the 4,470,000 per day for the first half of last year. In January-June 1941 output averaged only 3,680,000 barrels daily. Natural gasoline production was at a new high of 309,000 barrels daily in this year's first half, up 17.9 percent from the 262,000 daily in the corresponding period last year.

District Production

Although the United States as a whole produced 7 percent more crude in the first half of this year than in the like period last year, there were declines in nearly half the districts to hold down the national increase. States and districts that declined included Arkansas, Florida, Illinois, Indiana, Kansas, North Louisiana, Michigan, Montana, Nebraska, New Mexico, New York, Ohio, Pennsylvania, the Texas Panhandle, and West Virginia. Those declines were more than offset by increases in Alabama, California, Colorado, Kentucky, South Louisiana, Mississippi, Oklahoma, Wyoming, and especially Texas, where all districts except the Panhandle registered gains. California's production was up nearly 10 percent, as was that of Texas, but gains for Louisiana and Oklahoma were only about 1 percent. Among the Texas districts the greatest increase was in West Texas, although the Southwest Texas districts also showed exceptional increases.

Low Stocks

On declining to about 452,000,000 barrels at midyear 1945, the stocks of all oils were about 20,000,000 barrels lower than at the middle of 1944, but with demand running higher, they represented only 86 days' supply against 98 days' a year previously. Of the 20,000,000-barrel decrease since a year ago about one half has been in crude storage and the rest in refined products. Crude stocks stood at 220,781,000 barrels June 30, 1945, compared with 229,631,000 a year before and 259,695,000 barrels at the end of June, 1941. Heavy crude in storage in California totaled 4,940,000 barrels against 6,118,000 a year before and 10,711,000 in 1941. Stocks of refined products amounted to 221,709,000 against 232,767,000 a year previously and 275,229,000 in June, 1941.

The stocks of each of the major products are at exceptionally low levels. Gas-

Production, Changes in Stocks, and Indicated Demand for Petroleum and Principal Products

Based on Data from U. S. Bureau of Mines for 1941 and 1944; on American Petroleum Institute for 1945

(THOUSANDS OF BARRELS)

ITEM	JUNE 1941	JUNE 1944	JUNE 1945	JUNE % Diff. '44-'45	FIRST 6 MONTHS 1941	FIRST 6 MONTHS 1944	FIRST 6 MONTHS 1945	FIRST 6 MONTHS % Diff. '44-'45
ALL OILS								
Domestic Production, Total	121,451	145,621	156,016	+ 7.1	705,237	862,468	927,691	+ 7.6
(Daily Average)	4,048	4,854	5,200	+ 7.1	3,896	4,739	5,125	+ 8.1
Crude Oil	114,854	137,234	146,476	+ 6.7	666,098	813,540	870,314	+ 7.0
Natural Gasoline	6,324	8,187	9,300	+ 13.6	37,403	47,728	55,937	+ 17.1
Benzol	273	200	240	+ 20.0	1,736	1,200	1,440	+ 20.0
Imports	7,427	.....	.....	.....	43,059	.....	.....	.....
Crude	4,332	.....	.....	.....	22,014	.....	.....	.....
Refined	3,095	.....	.....	.....	21,045	.....	.....	.....
Change in Stocks	—2,795	—2,399	+285	.....	—11,407	—11,093	—24,609	.....
Stocks Beginning of Period	554,665	475,392	452,195	— 4.9	563,277	484,086	477,089	— 1.4
Stocks End of Period	551,870	472,993	452,480	— 4.3	551,870	472,993	452,480	— 4.3
(Days' Supply)	133	96	87	— 9.4	139	98	86	— 12.5
Refinable Crude	259,695	229,631	220,781	— 3.9	259,695	229,631	220,781	— 3.9
Heavy Crude in California	10,711	6,118	4,940	— 19.3	10,711	6,118	4,940	— 19.3
Natural Gasoline	6,235	4,477	5,050	+ 12.8	6,235	4,477	5,050	+ 12.8
Refined Products	275,229	232,767	221,709	— 4.7	275,229	232,767	221,709	— 4.7
Demand, Exclusive of Imports	124,246	148,020	155,731	+ 5.2	716,644	873,561	952,300	+ 9.0
(Daily Average)	4,142	4,934	5,191	+ 5.2	3,959	4,800	5,261	+ 9.6
Demand, Inclusive of Imports	131,673	.....	.....	.....	759,703	.....	.....	.....
CRUDE OIL—								
Demand by Source:								
Domestic Production	114,854	137,234	146,476	+ 6.7	666,098	813,540	870,314	+ 7.0
(Daily Average)	3,828	4,574	4,883	+ 6.7	3,680	4,470	4,808	+ 7.5
Imports	4,332	.....	.....	.....	22,014	.....	.....	.....
Change in Stocks (Refinable)	—3,036	— 5,545	—2,944	.....	—5,014	12,131	—81	.....
Stocks, Beginning of Period	262,731	235,176	223,725	— 4.9	264,709	241,762	220,862	— 8.6
Stocks, End of Period	259,695	229,631	220,781	— 3.9	259,695	229,631	220,781	— 3.9
(Days' Supply)	66	48	44	— 8.3	70	51	46	— 9.8
Demand, Exclusive of Imports	117,890	142,779	149,420	+ 4.7	671,112	825,671	870,395	+ 5.4
(Daily Average)	3,930	4,759	4,981	+ 4.7	3,708	4,537	4,809	+ 6.0
Demand, Inclusive of Imports	122,222	.....	.....	.....	693,126	.....	.....	.....
Demand by Use:								
Runs to Stills, Total	115,935	139,937	147,921	+ 5.7	668,663	809,860	867,476	+ 7.1
(Daily Average)	3,864	4,665	4,931	+ 5.7	3,694	4,450	4,785	+ 7.5
Domestic	111,500	135,989	142,521	+ 4.8	646,056	791,234	837,404	+ 5.8
Foreign	4,435	3,948	5,400	+ 36.8	22,607	18,626	30,072	+ 61.4
Exports	3,894	.....	.....	.....	15,896	.....	.....	.....
Transfers to Fuel Oil Stocks, used as Fuel and Losses	2,923	2,323	2,010	— 13.5	9,762	16,069	12,567	— 21.8
Demand, Exclusive of Exports	118,858	142,260	149,931	+ 5.4	678,425	825,929	878,578	+ 6.4
Demand, Inclusive of Exports	122,752	.....	.....	.....	694,321	.....	.....	.....
(Daily Average)	4,092	.....	.....	.....	3,836	.....	.....	.....
MOTOR FUEL								
Production, Total	57,589	61,719	67,731	+ 10.0	328,014	356,110	400,710	+ 12.5
(Daily Average)	1,923	2,057	2,258	+ 9.8	1,812	1,957	2,214	+ 13.1
Imports	.....	.....	.....	.....	.....	.....	.....	.....
Change in Stocks	—2,635	—4,232	—3,036	.....	+4,999	+5,218	+1,865	.....
Stocks, Beginning of Period	91,281	78,955	82,775	+ 4.8	83,647	69,505	77,874	+ 12.0
Stocks, End of Period	88,646	74,723	79,739	+ 6.7	88,646	74,723	79,739	+ 6.7
(Days' Supply)	44	34	34	.0	50	38	36	— 5.3
Finished Gasoline	82,411	70,246	74,689	+ 6.3	82,411	70,246	74,689	+ 6.3
Natural Gasoline	6,235	4,477	5,050	+ 12.8	6,235	4,477	5,050	+ 12.8
Demand, Exclusive Small Imports	60,224	65,951	70,767	+ 7.3	323,015	350,892	402,575	+ 14.7
(Daily Average)	2,007	2,198	2,359	+ 7.3	1,785	1,972	2,224	+ 12.8
GASOLINE								
Production, (Straight Run, Cracked, Natural Blended)	55,136	59,898	65,677	+ 9.7	313,297	345,403	388,813	+ 12.6
(Daily Average)	1,838	1,996	2,189	+ 9.8	1,731	1,898	2,148	+ 13.2
Percent Yield, str. run, cracked	44.5	38.9	40.3	.....	43.7	38.8	44.8	.....
Imports	.....	.....	.....	.....	.....	.....	.....	.....
Change in Stocks, Finished	—3,014	—4,473	—3,086	.....	+4,468	+5,282	+1,067	.....
Stocks, Beginning of Period	85,425	74,519	77,775	+ 4.4	77,943	64,964	73,622	+ 13.3
Stocks, End of Period	82,411	70,246	74,689	+ 6.3	82,411	70,246	74,689	+ 6.3
(Days' Supply)	43	33	33	.0	48	38	35	— 7.9
Demand, Exclusive Small Imports	58,150	64,371	68,763	+ 6.8	308,829	340,121	387,746	+ 14.0
(Daily Average)	1,938	2,146	2,292	+ 6.8	1,706	1,869	2,142	+ 14.0
KEROSINE								
Production	5,218	6,246	6,561	+ 5.0	35,901	39,889	39,315	— 1.4
(Daily Average)	174	208	219	+ 5.3	198	219	217	— .9
Percent Yield from Crude	4.5	4.5	4.4	.....	5.4	4.9	4.5	.....
Imports	.....	.....	.....	.....	43	.....	.....	.....
Change in Stocks	+1,188	+1,708	+1,451	.....	+97	+466	—1,474	.....
Stocks, Beginning of Period	8,421	8,117	8,225	+ 1.3	9,512	9,359	11,150	+ 19.1
Stocks, End of Period	9,609	9,825	9,676	— 1.5	9,609	9,825	9,676	— 1.5
(Days' Supply)	72	65	48	— 26.2	49	45	43	— 4.4
Demand, Exclusive Small Imports	4,030	4,538	5,020	+ 10.6	35,804	39,423	40,789	+ 3.5
(Daily Average)	134	151	167	+ 10.6	198	217	225	+ 3.7
DISTILLATE FUEL OIL								
Production	14,697	20,028	21,496	+ 7.3	92,011	118,508	124,976	+ 5.5
(Daily Average)	490	668	717	+ 7.3	508	651	690	+ 6.0
Percent Yield from Crude	12.7	14.3	14.5	.....	13.8	14.6	14.4	.....
Transfers from Crude	210	253	250	— 1.2	1,220	1,600	1,567	— 2.1
Imports	211	.....	.....	.....	1,887	.....	.....	.....
Change in Stocks	+2,885	+1,758	+2,563	.....	—4,637	—7,486	—6,120	.....
Stocks, Beginning of Period	35,389	32,484	29,650	— 8.7	42,911	41,728	38,333	— 8.1
Stocks, End of Period	38,274	34,242	32,213	— 5.9	38,274	34,242	32,213	— 5.9
(Days' Supply)	95	56	51	— 8.9	71	49	44	— 10.2
Demand, Exclusive of Imports	13,022	18,270	18,933	+ 3.6	97,868	125,994	131,096	+ 4.0
(Daily Average)	401	609	631	+ 3.6	541	692	724	+ 4.6
Demand, Inclusive of Imports	12,233	.....	.....	.....	99,755	.....	.....	.....
RESIDUAL FUEL OIL								
Production	28,255	37,902	40,016	+ 5.6	165,753	227,959	239,416	+ 5.0
(Daily Average)	942	1,263	1,334	+ 5.6	916	1,253	1,323	+ 5.6
Percent Yield from Crude	24.4	27.1	27.1	.....	24.8	28.1	27.6	.....
Transfers from Crude	1,070	2,070	1,760	— 15.0	4,802	14,429	11,000	— 23.8
Imports	2,458	.....	.....	.....	17,021	.....	.....	.....
Change in Stocks	+730	+1,967	+2,048	.....	+8,078	—1,835	—14,835	.....
Stocks, Beginning of Period	79,218	44,682	33,500	— 25.0	88,026	48,484	50,383	+ 3.9
Stocks, End of Period	79,948	46,649	35,548	— 23.8	79,948	46,649	35,548	— 23.8
(Days' Supply)	84	39	28	— 28.2	81	37	25	— 32.4
Demand, Exclusive of Imports	28,595	35,935	37,968	+ 5.7	178,633	229,794	254,251	+ 10.6
(Daily Average)	953	1,198	1,266	+ 5.7	987	1,263	1,405	+ 11.2
Demand, Inclusive of Imports	31,053	.....	.....	.....	195,654	.....	.....	.....

Stocks of Crude Petroleum in U. S. by Grades, at End of June

(Based on Weekly Reports of U. S. Bureau of Mines)

(THOUSANDS OF BARRELS)

Grade or Origin	June 28, 1941	July 1, 1944	June 30, 1945	Change 1941-1945
Pennsylvania Grade	4,297	2,651	2,114	— 2,183
Other Appalachian	1,420	1,506	1,304	— 116
Lima-Michigan	1,020	916	975	— 45
Illinois-Indiana	20,246	14,611	12,479	— 7,767
Arkansas	2,745	2,876	2,786	+ 41
Kansas	8,755	8,560	9,277	+ 522
Louisiana	12,439	13,241	13,915	+ 1,476
Northern	4,424	3,579	3,562	— 862
Gulf Coast	8,015	9,662	10,353	+ 2,338
Mississippi	1,507	873	1,256	— 251
New Mexico	7,203	6,411	5,953	— 1,250
Oklahoma	57,158	31,105	31,261	— 25,897
Texas	88,991	111,361	110,848	+ 21,857
East Texas	22,698	22,088	19,323	— 3,375
West Texas	16,557	29,946	31,687	+ 15,130
Gulf Texas	25,596	30,966	31,353	+ 5,757
Other Texas	24,140	28,361	28,485	+ 4,345
Panhandle	.....	6,287	4,924	.....
North	.....	5,895	7,581	.....
South	.....	6,317	7,381	.....
Other	.....	9,862	8,599	.....
Rocky Mountain	15,928	8,886	6,642	— 9,286
California	35,125	21,460	18,813	— 16,312
Foreign	2,565	1,967	3,158	+ 593
Total Gasoline Bearing in U.S.	259,399	226,424	220,781	— 38,618
Heavy in Calif.	10,716	5,945	4,940	— 5,776
Total U.S.	270,115	232,369	225,721	— 44,394

withdrawals have been largely in California inventories are several million barrels above a year ago, but the gain has been only in military grades, and the total is about 9,000,000 barrels lower than at this time in 1941. Kerosine stocks are about the same as a year ago about 3,000,000 barrels higher than at mid-1941. Distillate fuel oil inventories are 2,000,000 barrels lower than a year ago and 6,000,000 lower than at this time in 1941, although demand is much greater. Residual fuel oil has been especially instrumental in the declines in stocks of refined products, present inventories being 11,000,000 barrels lower than a year ago and 44,000,000 barrels lower than at the middle of 1941. The fornia, however, where stocks formerly were materially excessive. For all products as well as crude oil the current stocks are exceptionally low in relation to prevailing demand, representing abnormally small number of days' supply.

Runs to Stills Up

Crude oil runs to stills have shown increases closely in line with those for crude production. In the first half of this year the refinery runs averaged 4,785,000 barrels daily, up 7.5 percent from the 4,450,000 daily in the like period last year, and comparing with only 3,694,000 daily for January-June, 1941. Plants processed about 30,000,000 barrels of foreign crude against 18,626,000 in last year's first half, in reflection of increased imports.

California plants processed 10 percent more crude in this year's first half than in last year's and those of the Rocky Mountain district 15 percent more, while gains for other refining districts included 8 percent for Oklahoma-Kansas-Missouri, 7 percent for the combined East Coast-Southwestern districts, less than 5 percent for the Appalachian region, and a little over 2 percent for Illinois-Indiana-Kentucky.

The nation's refining capacity in June, 1945 was 5,432,000 barrels of crude daily and that was utilized to the extent of 90.7 percent. A year previously the capacity had been built up only to 4,908,000 barrels daily, which was used by the abnormally high proportion of 95 percent. Thus more than 500,000 barrels per day of capacity has been completed since a year ago. The present potential

Stocks of Major Petroleum Products Held by Refining Companies in the United States at End of June, 1941, 1944 and 1945

Stocks at refineries, at bulk terminals, in transit, and in pipe lines. Data for 1941 and 1944 from Bureau of Mines monthly reports; for 1945 from weekly reports of American Petroleum Institute.

(THOUSANDS OF BARRELS)

DISTRICT	FINISHED AND UNFINISHED GASOLINE Stocks End of June			KEROSINE Stocks End of June			GASOIL AND DISTILLATE FUEL Stocks End of June			RESIDUAL FUEL OIL Stocks End of June		
	1941	1944	1945	1941	1944	1945	1941	1944	1945	1941	1944	1945
Combined East Coast—Southwest	43,076	35,798	36,345	6,426	6,364	6,406	21,673	18,896	16,236	19,180	15,488	14,166
East Coast	22,698	.....	13,181	1,304	.....	3,373	10,868	.....	7,286	7,761	.....	5,929
Inland Texas	2,809	.....	2,908	231	.....	244	279	.....	445	1,566	.....	921
Texas Gulf Coast	13,508	.....	13,647	3,768	.....	1,537	8,742	.....	6,032	8,171	.....	6,024
Louisiana Gulf Coast	3,351	.....	3,985	881	.....	1,067	1,539	.....	1,803	1,294	.....	1,120
North Louisiana and Arkansas	710	.....	2,624	242	.....	185	245	.....	670	388	.....	172
Appalachian	3,292	3,353	4,363	166	384	314	376	1,384	442	539	499	331
District No. 1	.....	.....	3,017	.....	.....	250	.....	.....	346	.....	.....	264
District No. 2	.....	.....	1,346	.....	.....	64	.....	.....	96	.....	.....	67
Indiana, Illinois, Kentucky	17,786	18,477	19,939	1,212	1,926	1,604	3,774	5,229	4,415	3,568	3,488	3,280
Oklahoma, Kansas, Missouri	7,595	7,000	7,555	560	606	795	1,397	1,372	1,818	2,066	1,390	1,345
Rocky Mountain	2,036	2,191	2,456	103	85	128	296	358	343	640	630	565
District No. 3	.....	.....	86	.....	.....	20	.....	.....	21	.....	.....	36
District No. 4	.....	.....	2,370	.....	.....	108	.....	.....	322	.....	.....	529
California	16,057	15,165	13,914	1,142	460	429	10,853	8,003	8,959	55,024	25,145	16,961
Total United States	89,842	81,984	81,984	9,609	9,825	9,676	38,369	35,242	32,213	81,017	46,649	35,568

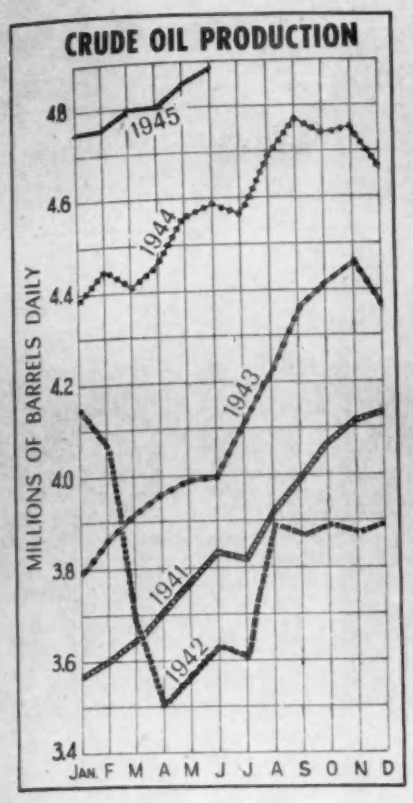
U. S. Crude Runs to Stills and Percent of Refinery Capacity Used by Districts, June and First 6 Months, 1941, 1944, 1945

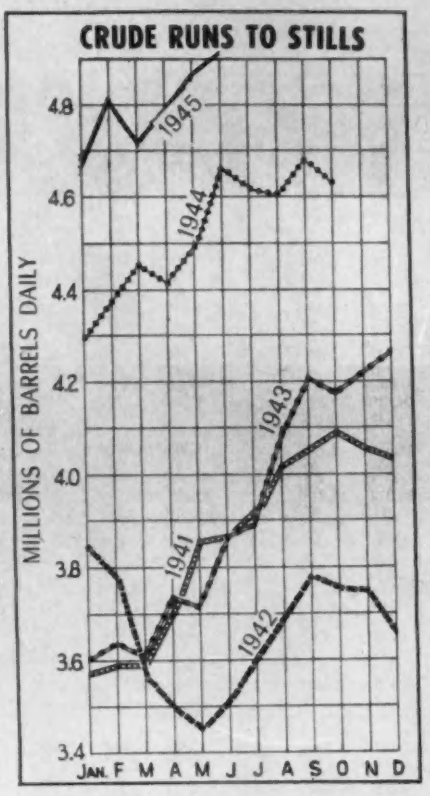
Runs from Bureau of Mines, except May and June, 1945, from American Petroleum Institute. Capacities from American Petroleum Institute

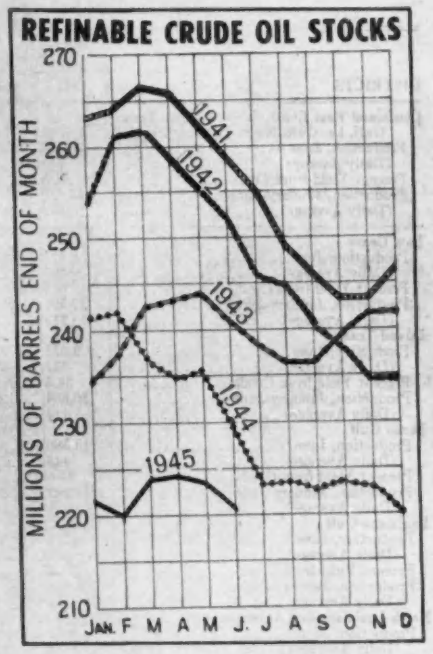
(THOUSANDS OF BARRELS)

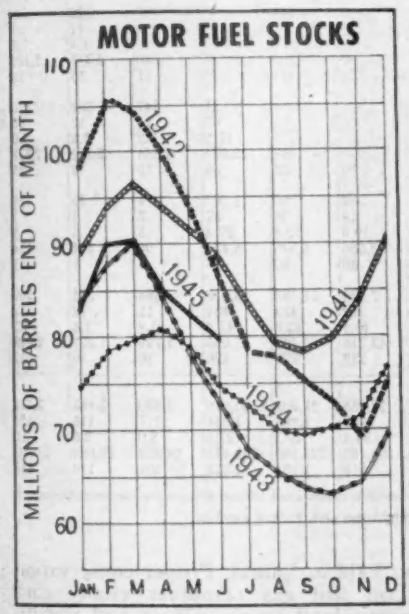
REFINING DISTRICT	CRUDE RUNS IN JUNE: Total Amount Run				CRUDE RUNS IN JUNE: Daily Average Run			REFINING CAPACITY AND USE JUNE: Daily Capacity			REFINING CAPACITY AND USE JUNE: Percent Capacity Used			TOTAL AMOUNT CRUDE RUN TO STILLS. FIRST 6 MONTHS			
	June, 1941	June, 1944	June, 1945	% Diff. '44-'45	June, 1941	June, 1944	June, 1945	June, 1941	June, 1944	June, 1945	June, 1941	June, 1944	June, 1945	January to June, 1941	January to June, 1944	January to June, 1945	% Dif. '44-'45
Combined East Coast—Southwest	57,560	73,179	76,253	+ 4.2	1,919	2,439	2,542	2,259	2,518	2,744	84.9	96.9	92.6	343,847	415,601	446,450	+ 7.4
East Coast	16,955	.....	22,415	.....	565	.....	747	643	.....	791	87.9	.....	94.4	101,988	.....	133,010	.....
Inland Texas	5,551	.....	7,204	.....	185	.....	240	280	.....	330	66.1	.....	72.7	32,102	.....	43,347	.....
Texas Gulf Coast	28,482	.....	35,858	.....	950	.....	1,195	1,071	.....	1,237	88.7	.....	96.6	171,374	.....	209,334	.....
Louisiana Gulf Coast	4,448	.....	8,195	.....	148	.....	273	164	.....	260	90.2	.....	105.0	24,859	.....	46,197	.....
North Louisiana and Arkansas	2,124	.....	2,581	.....	71	.....	86	101	.....	126	70.3	.....	68.3	13,524	.....	14,562	.....
Appalachian	4,491	4,471	4,750	+ 6.2	150	149	158	156	177	196	96.2	84.2	80.6	25,924	27,676	28,944	+ 4.6
District No. 1	.....	.....	3,093	.....	.....	.....	103	.....	.....	146	.....	.....	70.5	.....	.....	18,102	.....
District No. 2	.....	.....	1,657	.....	.....	.....	55	.....	.....	50	.....	.....	110.0	.....	.....	10,842	.....
Indiana, Illinois, Kentucky	21,225	23,193	22,751	— 1.9	707	773	758	743	824	857	95.2	93.8	88.4	118,707	137,410	140,556	+ 2.3
Oklahoma, Kansas, Missouri	10,831	11,064	11,744	+ 6.1	361	369	392	420	418	469	86.0	88.3	83.4	60,578	64,282	69,450	+ 8.0
Rocky Mountain	2,924	3,496	4,020	+15.0	97	117	134	121	154	172	80.2	76.0	77.9	15,805	19,754	22,786	+15.3
District No. 3	.....	.....	365	.....	.....	.....	12	.....	.....	13	.....	.....	92.3	.....	.....	2,149	.....
District No. 4	.....	.....	3,655	.....	.....	.....	122	.....	.....	159	.....	.....	76.7	.....	.....	20,637	.....
California	18,904	24,534	28,403	+15.8	630	818	947	836	817	994	75.3	100.1	95.3	103,802	145,137	160,100	+10.3
Total United States	115,935	139,937	147,921	+ 5.7	3,864	4,665	4,931	4,535	4,908	5,432	85.2	95.0	90.7	668,663	809,860	868,286	+ 7.2

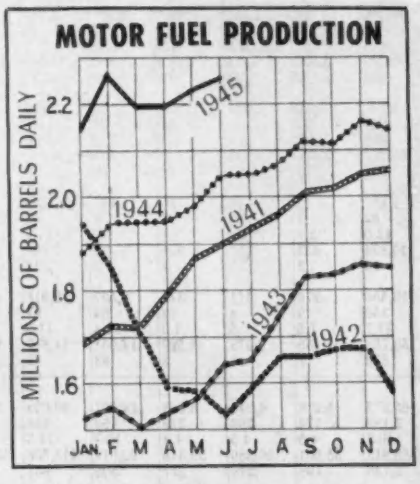
Monthly Activity Trends

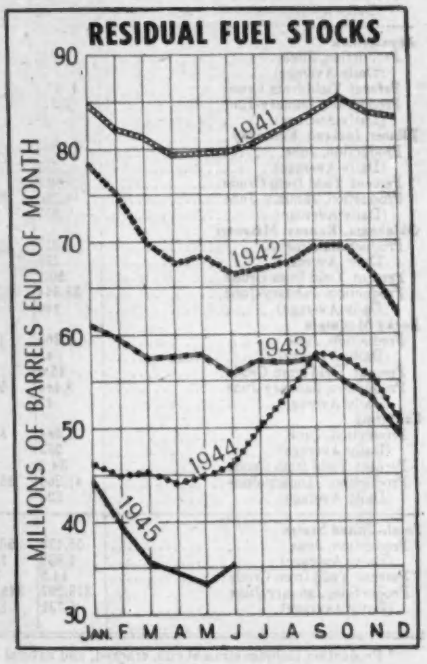


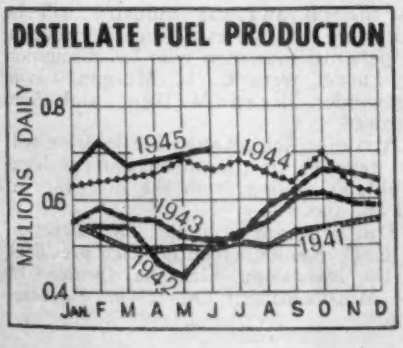


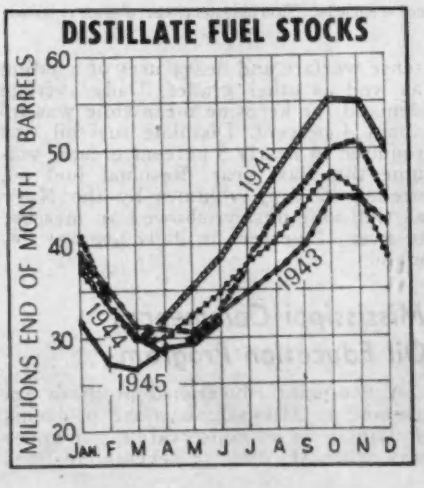


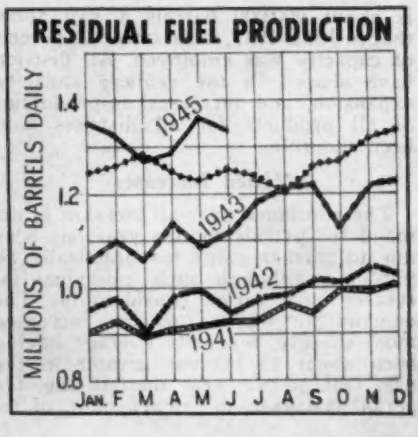












Refinery Production of Major Products and Percent Yield from Crude Run by Districts

Results in June and first 6 months, 1945, compared with those in like period last year and in 1941, last pre-war year for U. S. All data from U.S. Bureau of Mines except May and June, 1945, estimated with aid of A.P.I. weekly bulletins.

(THOUSANDS OF BARRELS)

DISTRICTS	*GASOLINE			KEROSINE			DISTILLATE FUEL OIL			RESIDUAL FUEL			LUBRICANTS		
	1941	1944	1945	1941	1944	1945	1941	1944	1945	1941	1944	1945	1941	1944	1945
Combined East Coast, Texas Inland, Texas Gulf, La. Gulf, North La. and Ark.															
Production, June	26,495	30,193	33,196	3,245	3,971	4,134	8,069	11,925	12,749	13,735	18,523	18,170	1,888	1,943	2,033
(Daily Average)	883	1,006	1,106	108	132	138	269	398	425	458	617	606	63	65	67
Percent Yield from Crude	43.5	37.1	39.3	5.6	5.4	5.4	14.0	16.3	16.7	23.9	25.3	23.8	3.3	2.7	2.7
Production, January-June	153,678	168,733	196,305	22,866	24,873	25,028	54,301	71,813	74,755	81,697	109,418	111,116	9,630	10,864	11,551
(Daily Average)	849	927	1,085	126	137	138	300	394	413	451	601	614	53	60	64
East Coast															
Production, June	6,871	.....	7,693	548	.....	701	2,680	.....	4,402	4,465	.....	6,786	769	.....	702
(Daily Average)	229	.....	256	18	.....	23	89	.....	147	149	.....	226	26	.....	25
Percent Yield from Crude	39.9	.....	33.4	3.2	.....	3.1	15.8	.....	19.6	26.3	.....	30.3	4.5	.....	3.4
Production, January-June	39,591	.....	48,265	4,162	.....	4,819	20,337	.....	24,369	25,471	.....	41,513	3,900	.....	4,257
(Daily Average)	219	.....	267	23	.....	27	112	.....	135	141	.....	229	22	.....	24
Inland Texas															
Production, June	3,623	.....	4,119	227	.....	359	168	.....	540	1,206	.....	1,994	25	.....	22
(Daily Average)	121	.....	137	7	.....	12	6	.....	18	40	.....	66	1	.....	1
Percent Yield from Crude	54.5	.....	46.1	4.1	.....	5.0	3.0	.....	7.5	21.7	.....	27.7	.5	.....	.3
Production, January-June	20,684	.....	24,616	1,546	.....	2,354	1,149	.....	3,144	6,972	.....	11,951	191	.....	127
(Daily Average)	114	.....	136	9	.....	13	7	.....	17	38	.....	66	1	.....	1
Texas Gulf															
Production, June	13,386	.....	16,556	1,732	.....	1,823	4,206	.....	6,062	6,610	.....	7,460	850	.....	902
(Daily Average)	446	.....	552	58	.....	61	140	.....	202	220	.....	249	28	.....	81
Percent Yield from Crude	44.5	.....	41.3	6.1	.....	5.1	14.8	.....	16.9	23.2	.....	20.8	3.0	.....	2.6
Production, January-June	77,942	.....	96,212	12,218	.....	10,827	27,698	.....	37,486	39,821	.....	46,012	4,259	.....	5,358
(Daily Average)	431	.....	531	67	.....	60	153	.....	207	220	.....	254	23	.....	30
Louisiana Gulf															
Production, June	1,734	.....	3,799	530	.....	1,016	834	.....	1,428	1,004	.....	1,376	187	.....	188
(Daily Average)	58	.....	127	18	.....	34	28	.....	47	34	.....	46	6	.....	6
Percent Yield from Crude	38.5	.....	43.3	11.9	.....	12.4	18.8	.....	17.4	22.6	.....	16.8	4.2	.....	2.3
Production, January-June	9,601	.....	21,394	3,412	.....	5,684	4,043	.....	8,027	6,103	.....	8,342	926	.....	1,097
(Daily Average)	53	.....	118	19	.....	31	22	.....	44	34	.....	46	5	.....	6
North Louisiana and Arkansas															
Production, June	881	.....	1,029	208	.....	235	181	.....	317	450	.....	554	57	.....	129
(Daily Average)	29	.....	34	7	.....	8	6	.....	11	15	.....	19	2	.....	4
Percent Yield from Crude	40.1	.....	32.1	9.8	.....	9.1	8.5	.....	12.3	21.2	.....	21.5	2.6	.....	5.0
Production, January-June	5,860	.....	5,818	1,528	.....	1,344	1,074	.....	1,729	3,330	.....	3,298	354	.....	712
(Daily Average)	32	.....	32	8	.....	7	6	.....	10	18	.....	18	2	.....	4
Appalachian															
Production, June	2,147	1,893	2,120	242	319	283	422	464	551	658	677	852	565	435	430
(Daily Average)	72	63	71	8	11	9	14	15	18	22	23	28	19	14	14
Percent Yield from Crude	47.2	41.6	43.9	5.4	7.1	6.0	9.4	10.4	11.6	14.7	15.1	17.9	12.6	9.7	9.0
Production, January-June	12,313	11,773	12,808	1,655	2,004	1,823	2,431	3,162	3,243	3,909	4,612	5,071	3,064	2,641	2,486
(Daily Average)	68	65	71	9	11	10	13	17	18	22	25	28	17	14	14
Illinois, Indiana, Kentucky															
Production, June	11,728	11,706	11,702	701	1,145	957	2,371	2,685	2,955	3,883	4,809	4,258	347	329	386
(Daily Average)	391	390	390	24	38	32	79	90	98	130	160	142	12	11	13
Percent Yield from Crude	52.7	47.6	48.1	3.3	4.9	4.2	11.2	11.6	13.0	18.3	20.7	18.7	1.6	1.4	1.7
Production, January-June	64,250	69,120	72,837	5,832	6,814	5,912	12,466	17,401	18,047	23,164	28,536	27,136	1,930	2,313	2,386
(Daily Average)	355	380	402	32	38	33	69	96	100	128	157	150	11	13	13
Oklahoma, Kansas, Missouri															
Production, June	5,817	5,642	6,246	672	633	722	1,077	1,652	2,001	1,824	1,911	2,021	347	362	470
(Daily Average)	194	188	208	22	21	24	36	55	67	61	64	67	11	12	16
Percent Yield from Crude	50.9	47.6	50.0	6.2	5.7	6.1	10.0	14.9	17.0	16.8	17.3	17.2	3.2	3.3	4.0
Production, January-June	33,344	32,600	36,277	3,860	4,248	4,429	6,516	9,046	10,947	10,718	11,498	12,534	1,884	2,202	2,738
(Daily Average)	184	179	200	21	23	24	36	50	61	59	63	69	10	12	15
Rocky Mountain															
Production, June	1,365	1,732	1,857	82	67	95	231	384	442	582	797	1,102	9	29	26
(Daily Average)	45	58	62	3	2	3	8	13	15	19	26	37	.3	1	1
Percent Yield from Crude	45.0	46.7	43.0	2.8	1.9	2.4	7.9	11.0	11.0	19.9	22.8	27.4	.3	.8	.6
Production, January-June	8,446	9,377	10,834	433	437	596	1,336	2,199	2,440	3,550	5,446	6,494	96	141	134
(Daily Average)	47	51	60	3	2	3	7	12	14	20	30	36	.5	1	1
California															
Production, June	7,584	8,732	10,556	276	111	370	2,527	2,918	2,798	7,573	11,185	13,613	364	355	369
(Daily Average)	253	291	352	9	4	12	84	97	93	252	373	454	12	12	12
Percent Yield from Crude	34.2	30.8	31.7	1.5	.5	1.3	13.4	11.9	9.9	40.1	45.6	47.9	1.9	1.4	1.3
Production, January-June	41,266	53,800	59,752	1,255	1,513	1,527	14,961	14,887	15,544	42,715	68,449	77,065	1,729	1,927	2,098
(Daily Average)	228	296	330	7	8	8	83	82	86	236	376	426	10	10	12
Total, United States															
Production, June	55,136	59,898	65,677	5,218	6,246	6,561	14,697	20,028	21,496	28,255	37,902	40,016	3,520	3,453	3,714
(Daily Average)	1,838	1,996	2,189	174	208	219	490	668	717	942	1,263	1,334	117	115	124
Percent Yield from Crude	44.5	38.9	40.3	4.5	4.5	4.4	12.7	14.3	14.5	24.4	27.1	27.1	3.0	2.5	2.5
Production, January-June	313,297	345,403	388,813	35,901	39,889	39,315	92,011	118,508	124,976	165,753	227,959	239,416	18,333	20,088	21,393
(Daily Average)	1,731	1,898	2,148	198	219	217	508	651	690	916	1,252	1,323	101	110	118

* Production includes straight run, cracked, and natural blended at refineries. Yield incidates precent of crude runs made into straight run and cracked gasoline.

is about 900,000 barrels a day above that in June, 1941, when only 85.2 percent of capacity was employed. All districts have shared in the refinery capacity, expansion, and increases in production of all products for all districts have been the rule.

Varied Increases

The continued over-all increase in demand for petroleum this year has been due to further gains for practically all products, although such individual increases have varied considerably. The demand for motor fuel has increased most sharply, the daily average having been about 13 percent greater in the first half of this year than in the like period last year, in the reflection of intense warfare and heavy uses of aviation as well as other grades. Daily average demand for kerosine meanwhile was up about 4 percent. Distillate fuel oil was required in nearly 5 percent greater volume than last year. Residual fuel oil, needed in large volumes by the Navy as well as industry, showed an increase of over 11 percent in daily average demand.

Mississippi Commences Oil Education Program

A five-point educational program explaining to Mississippians the problems pertaining to oil conservation got under way when the first of several meetings was held in Laurel. Proper conservation of oil and gas resources vitally concerning land owners, lease and royalty holders, the people at large as well as the oil and gas industry will be the topic of a series of the 15 meetings. A panel of four men who led discussion at Laurel were C. L. Morgan, Clyde Alexander, Fred Mellen, and Alec Crowell.

A conference planned for Jackson will be devoted to the discussion of legal problems arising from the discovery of oil and gas.

The program is under the direction of E. D. Kenna, executive vice president of the Mississippi-Alabama divisions of the Mid-Continent Oil & Gas Association.

Of strict wildcats completed during the half year, 11.6 percent found oil, gas or distillate fields

Ratio of Wildcatting Success Betters Eight-Year Average

DURING the first half of 1945 wildcatting in the United States paid dividends in the form of new fields on almost exactly the same basis as the long-term wildcatting of the eight preceding years, 1937-1944, nearly the same ratio of success having been experienced.

Of the strict wildcats completed during the half year 11.6 percent were productive, having discovered new oil, distillate, or gas fields. Of the wildcats completed in 1937-1944, 11 percent found fields.

This record for 1945, slightly better than the eight-year average, is especially encouraging because it was achieved under abnormal conditions in which the volume of wildcatting has been artificially stimulated to record levels in the urgent need for new fields, with operators exploring more than normal proportions of the less promising prospects. However, optimism must be tempered by the warnings of many operators that they are "running out" of first-rate prospects; that they may not be able henceforth to score as high percentages of strikes as in the past.

That the industry lately has devoted greater than normal ratio of its total drilling to the search for new fields is attested by accompanying statistics. In the first half of this year 15.6 percent of all wells completed were strict wildcats—tests in strictly unproved areas and exclusive of tests in or closely adjacent to established fields seeking new pay zones or attempting to extend the fields. As compared with that 15.6 percent ratio this year, only 11.0 percent of all wells completed in the eight years, 1937-1944, were strict wildcats.

The exceptional emphasis on wildcatting this year has been literally nationwide, nearly all states and districts hav-

Ratio of Wildcatting to All Drilling and Proportion of Wildcats Discovering New Fields, by Districts, 1937-45

STATE OR DISTRICT	8 YEARS, 1937-1944						FIRST 6 MONTHS, 1945					
	Total Wells Drilled (All Classes)	*STRICT WILDCATS					Total Wells Drilled (All Classes)	*STRICT WILDCATS				
		Total			Productive			Total			Productive	
		Number	Percent of All Wells	Dry	Number	Percent of All Strict Wildcats		Number	Percent of All Wells	Dry	Number	Percent of All Strict Wildcats
Alabama	67	67	100.0	66	1	1.5	16	9	56.3	8	1	11.1
Arizona	17	17	100.0	17	....	....	....	....	....	....	....	....
Arkansas	1,672	386	23.1	352	34	8.8	85	23	29.4	23	....	....
California	10,350	1,145	11.1	1,076	69	6.0	1,063	147	13.8	144	3	2.0
Colorado	158	51	22.3	47	4	7.8	12	2	16.7	2	....	....
Florida	21	21	100.0	20	1	4.8	9	9	100.0	9	....	....
Georgia	22	22	100.0	22	....	....	4	4	100.0	4	....	....
Illinois	20,236	3,316	16.4	3,083	233	7.0	825	175	21.2	165	10	5.7
Indiana	2,703	680	25.2	615	65	9.6	145	49	33.8	47	2	4.0
Iowa	13	13	100.0	13	....	....	1	1	100.0	1	....	....
Kansas	15,078	2,247	14.9	1,874	373	16.6	774	189	24.4	161	28	14.8
Kentucky	4,143	540	13.0	479	61	11.3	229	45	19.7	39	6	13.3
Louisiana	8,851	1,151	13.0	990	161	14.0	483	88	18.2	71	17	19.3
North Louisiana	3,755	595	15.8	553	42	7.1	159	49	30.8	41	8	16.3
South Louisiana	5,096	556	10.9	437	119	21.4	324	39	12.0	30	9	23.1
Michigan	7,410	1,985	26.1	1,793	142	7.3	374	118	31.6	110	8	6.8
Mississippi	853	402	47.1	388	14	3.5	188	64	34.0	61	3	4.7
Missouri	384	107	27.9	103	4	3.7	21	13	61.9	13	....	....
Montana	1,635	107	6.5	88	19	17.8	94	6	6.4	4	2	33.3
Nebraska	234	146	62.4	143	3	2.1	2	2	100.0	2	....	....
New Mexico	3,955	392	9.9	338	54	13.8	217	35	16.1	32	3	8.6
New York	7,994	....	....	....	....	....	517	....	....	....	....	....
North Dakota	1	1	100.0	1	....	....	....	....	....	....	....	....
Ohio	9,195	117	1.3	96	21	17.9	436	42	9.6	33	9	21.4
Oklahoma	16,214	1,763	10.9	1,454	309	17.5	1,165	187	16.1	152	35	18.7
Pennsylvania	26,541	....	....	....	....	....	1,447	....	....	....	....	....
South Carolina	4	4	100.0	4	....	....	....	....	....	....	....	....
South Dakota	3	3	100.0	3	....	....	....	....	....	....	....	....
Tennessee	137	85	62.0	79	6	7.1	2	1	50.0	1	....	....
Texas	72,646	9,081	12.5	8,099	982	10.8	3,584	678	18.9	588	90	13.3
East Texas Border	115	19	16.5	19	....	....	34	8	23.5	8	....	....
East Texas Field	5,557	....	....	....	....	....	....	....	....	....	....	....
Rest of Eastern Texas	3,573	860	24.1	819	41	4.8	109	36	33.0	33	3	8.3
North Texas	14,427	1,722	11.9	1,457	265	15.4	827	160	19.3	147	13	8.1
West Central Texas	3,812	953	25.0	844	109	11.4	230	72	31.3	61	11	15.3
West Texas	15,523	972	6.3	851	121	12.4	934	122	13.1	109	13	10.7
Texas Panhandle	4,096	51	1.2	46	5	9.8	288	4	1.4	4	....	....
Gulf Coast, Upper	7,678	937	12.2	826	111	11.8	354	77	21.8	61	16	20.8
Gulf Coast, Lower	8,909	1,333	15.0	1,144	189	14.2	512	114	22.3	90	24	21.1
Southwest Texas	6,661	1,368	20.5	1,263	105	7.7	249	63	25.3	55	8	12.7
South Central Texas	2,295	866	37.7	830	36	4.2	47	22	46.8	20	2	9.1
Utah	12	6	50.0	6	....	....	....	....	....	....	....	....
Virginia	1	1	100.0	....	1	100.0	....	....	....	....	....	....
West Virginia	6,125	4	0.1	2	2	50.0	385	....	....	....	....	....
Wyoming	1,025	154	15.0	77	77	50.0	64	10	15.6	7	3	30.0
Total United States	217,700	23,964	11.0	21,328	2,636	11.0	12,142	1,897	15.6	1,677	220	11.6

* Exclusive of all tests seeking new pay zones or attempting to extend known fields.

ing devoted substantially greater proportions of their total drilling to wildcatting than in the preceding eight years. Texas, for example, showed 18.9 percent wildcats among completions of January-June, 1945, against only 12.5 percent for the eight years, 1937-1944; California, 13.8 percent against 11.1; Oklahoma, 16.1 percent against 10.9 percent; Louisiana, 18.2 percent against 13.0; New Mexico, 16.1 against 9.9; Kansas, 24.4 against 14.9; Illinois, 21.2 percent against 16.4; Arkansas, 29.4 against 23.1; Michigan, 31.6 against 26.1; Kentucky, 19.7 against 13; Wyoming, 15.6 against 15. Mississippi and Alabama are exceptional cases in which the ratio of wildcats among completions are now lower than formerly because they have fields and formerly were still strictly wildcat states.

Varied Success

While 11.6 percent of all strict wildcats completed in the United States in the first half of 1945 were productive, the corresponding ratio of success varied considerably among different states and districts. Texas, Louisiana, Oklahoma, and Kansas showed results better than the national average, as did several other areas, but California, Illinois, Indiana, Michigan, New Mexico and a few other districts were below the national average. As compared with 11.6 percent successful wildcats for the whole country, the ratios by districts included the following: Alabama, 11.1 percent; California, 2; Illinois, 5.7; Indiana, 4; Kansas, 14.8; Kentucky, 13.3; State of Louisiana, 19.3; North Louisiana, 16.3; South Louisiana, 23.1; Michigan, 6.8; Mississippi, 4.7; Montana, 33.3; New Mexico, 8.6; Oklahoma, 18.7; State of Texas, 13.3; East Texas, 8.3; North Texas, 8.1; West Central Texas, 15.3; West Texas, 10.7; Upper Texas Gulf Coast, 20.8; Lower Texas Coast, 21.1; Southwest Texas, 12.7; South Central Texas, 9.1; Wyoming, 30.0 percent.

These ratios of success were fairly close to the corresponding ratios for the eight years, 1937-1945, in several districts, including Illinois, Kansas, Kentucky, Michigan, Mississippi, Oklahoma, and West Texas. But some districts did better than in the preceding eight years, including both North and South Louisiana, Montana, the state of Texas, East Texas, West Central Texas, the upper and lower sections of the Texas Gulf Coast, Southwest Texas, and South Central Texas. On the other hand, the proportion of successful wildcats has been lower this year than in eight years, 1937-1944, in California, Arkansas, Colorado, Indiana, New Mexico, and North Texas.

United States' exploratory drilling efforts during the first half of 1945 were successful only from a numerical viewpoint. New discoveries failed to include any unusually big oil fields. There were some important strikes, but present indications are that these will be relatively few. Most of the additional new oil supply proved to exist came from the development of previously discovered fields, as is usually the case.

West Texas Developments

The nation's record for the discovery of new natural gas reserves closely paralleled the results of oil.

West Texas experienced some of the most interesting developments of the nation. Several major oil areas are in store for the district during 1945 completion. Meanwhile, the TXL field, a 1944 discovery, was developed sufficiently to qualify as a major field in the Devonian, and the Ellenburger was proved a more attractive source of sweet crude by two wells 2¼ miles apart and on a parallel trend with the Devonian.

Thirteen oil discoveries in West Texas during the first half of 1945 included three from the Devonian, which recorded its first completion for the state last August. New oil horizons were listed by eight fields, while seven oil fields were extended in excess of one mile. Some of these strikes involve high gravity sweet crude that will retain a firmer market than the region's sulphur crude during the postwar period. Pending discoveries of special significance include a probable four-pay strike in Southwestern Andrews County, and a Crane County Ellenburger project that indicates commercial production at tested intervals in a 1005-foot section of Devonian.

In adjoining New Mexico, discovery of new deeper horizons in established fields stood out as the most important development trend. The state listed a shallow gas strike in Eddy County and two oil discoveries in Lea County during the first half of 1945. Two new oil zones were uncovered in the Drinkard area, Lea County, while a new producing depth record for the state resulted from a prolific gas completion from the 8400-8600-foot Pennsylvanian in the Barker Dome area, San Juan County.

Lea County will experience a substantial gain in drilling activity during the remainder of year due to the finding of new oil zones and expansion of the Drinkard area, while the near-by Paddock field in the 5200-foot Glorietta lime will be drilled up. High structural position of a deep test in the Penrose regular Permian area carries a favorable outlook for deeper production. Other Lea County producing structures are in line for their initial deep explorations. Eddy County operators are likewise planning deep tests, as no operations have been conducted below the Pennsylvanian.

Other Texas Areas

Outside of West Texas, results in Texas were pretty meager. The lower Texas coast region experienced a widespread campaign, yet only 27 of the wildcats completed were productive, whereas there were 40 producing exploratory tests finished in the first half of 1944. Higher than average price for Texas crude plus comparatively shallow depths undoubtedly were important economic factors that attracted many operations to the region. However, there was an almost woeful lack of significant new strikes.

Although wildcat drilling on the upper Texas coast was slightly greater than in the first half of 1944, very little new crude oil reserves were discovered. Future development probably will show several important gas-distillate pools were found, but because of lack of recycling plant equipment these new discoveries cannot be exploited until after the war. Considerable interest centered in the deep Woodbine sand trend. Leasing extended from Madison County on the west to the Louisiana line on the east. The play followed discovery of the sand in Houston and Walker counties, the farthest south it has been found, although none of the wells made commercial producers. The Wilcox sand trend also received considerable wildcatting, but with the possible exception of the Subline field, Colorado County, no major oil fields resulted.

The world's deepest drilling depth was reached by Phillips Petroleum Company's Fanny Schoepps 3, Millican Dome, Brazos County, which went to 16,655 feet.

Southwest Texas and South Central Texas were completedy void of major oil strikes, and also experienced completion of fewer productive wildcat tests than in the first six months of 1944.

West Central Texas had an increased volume of wildcatting. None of the strikes, however, are likely to attain importance from the standpoint of productive area or ultimate crude reserves, although they will stimulate the search for new regions. Discovery of prolific gas flow from the Marble Falls lime near Eden, Concho County, followed by extensions to the southwest and northeast, revealed a substantial gas producing area.

Aggressive wildcat activity in North Texas during the first half of the year failed to yield a normal volume of new crude reserves. The district recorded 1 gas and 12 oil discoveries, while new producing zones were uncovered in 8 fields and pools.

Expansion of previously established oil areas afforded a substantial gain in crude reserves. Montague County was the heaviest contributor through progressive extensions give the Hildreth field to the north, northwest and west, while the Bowers field near the east side of the county scored a revival in drilling through a south extension. In Archer County, the Vogtsberger, Daume and Luke areas remained active and paved the way for additional drilling through series of short extensions. The Strawn sand horizon in the Joy and Antelope multi-pay areas, Clay County, was a substantial contributor of new wells with more development pending. The multi-pay Ellis field and the McDonald area were the most active in Jack County.

Development of the 1945 oil discoveries has not progress sufficiently to determine whether any will attain importance. The Ellenburger discovery by the National Associated Petroleum Company's Kelly 1, Eastern Wilbarger County, is considered the most promising due to two or more porspective oil horizons in the upper zones. Dual completions are likely.

East Texas

Prospecting in East Texas brought only meager results in the face of a substantial decline in activity. Exclusive of the border countries, the district recovered thin-pay deep oil discoveries in Henderson and Van Zandt counties. A Travis Peak gas-distillate area was uncovered near Fairfield, Freestone County. Deeper drilling in the old Coke field, Wood County, accounted for a prolific gas-distillate well from the 8100-foot Young, or Basal Rodessa, zone.

East Texas border counties accounted for three new distillate discoveries. Major development was in the Carthage gas field, considered one of the largest gas reserves in the nation. This field now covers approximately 190,000 acres with drilling very active. Production is from the Pettit with attempts under way to deepen the producing horizon from an average of 6000

to 8000 feet. New pipe line outlets and gasoline will aid in the development of this gas reserve.

Oklahoma Successful

More than a third of Oklahoma's wildcat wells were productive. A total of 210 tests were completed, which added 58 new producing sources, including 28 oil, one distillate and six new gas fields, besides extensions and new producing horizons.

An important deep distillate field was opened about nine miles east of the old Chickasha gas area, Grady County. It flowed 441 barrels and more than 2 million feet of gas from basal Pennsylvanian sand at 10,879-82 feet. This discovery focused attention on the deep possibilities of the Andarko Basin, although development will be slow due to great depth.

Noteworthy among the gas discoveries was a deep strike in the old Erick gas pool. The field previously produced from Permian beds at approximately 2400 feet, but the Arkosic lime (Pennsylvanian) was proved productive at 6786-6810 feet.

Outstanding oil discoveries for the first six months of the year included Cities Service Oil Company's strike in 6-22n-3w, a mile north of the old Garber pol in Garfield County, although subsequent drilling appears to limit the producing zone; Con-Tex Petroleum Company's Wolfe 1, two miles north of the Barnes pool in Garfield County; The Carter Oil Company's extension of the Washington pool in McClain County where operator is developing deep Anadarko Basin possibilities along the western rim of the Nemaha Ridge; The Ohio Oil Company's discoveries of new pay zones in the East Pauls Valley pool area where four producing horizons have been proved, and extensions to the four-county West Edmond pool of Central Oklahoma, which has approximately 600 wells and produces an average of 76,000 barrels of oil daily. Other important developments included discovery of important new reserves in the old Ramsey field, development of Bartlesville sand production in the Moore area where several wells drilled to deep dry Wilcox sand are being completed in the shallower horizon and an important strike in the Middle Rowe sand (Pennsylvanian) in the townsite sector of the old Cement pool of Caddo County.

Kansas Operations

Outstanding Kansas oil discovery was a 2800-barrel Arbuckle lime well 2½ miles northwest of the Pawnee Rock pool, Rush County. This development attracted considerable activity to the west-central region of the Kansas Uplift and resulted in important extensions to the Bemis and Walters pools.

Carter's discovery in Sumner County, 1½ miles northeast of Perth, reactivated this region at the north end of the Nemaha Ridge and much new development is expected.

Stanolind Oil & Gas Company's Adams 1, in the center of the 90,000-acre Adams ranch in Meade County, southwestern part of the state, was the largest gas discovery, the well gauging 88 million cubic feet of gas from Mississippi lime. Stanolind also gave the Hugoton gas area three long extensions to the east and west.

California Disappointing

California continued a very intensive search for new oil sources, but the amount of oil discovered was disappointing. Wildcatting in the state undoubtedly will continue at approximately its present high pace for the remainder of the year. More wildcats and more wildcat footage likely will be drilled than in any other year, but the average oil reserves per field discovered probably will be very small.

A few wildcats will get underway in Oregon and Washington. These Pacific Northwest tests will be watched with interest.

Mississippi Has Let-Down

The year, 1945, which started out with such promising prospects for Mississippi, concluded the first six months with a period embracing an abnormally large number of dry exploratory completions. In contrast with a most successful discovery record in 1944, not a single new oil field resulted from the completion of 65 wildcats in the first half of 1945. The state, however, did record the discovery of one new gas field, two new gas distillate fields, and the extension of an oil field.

Exploration continues undiminished, although in a much more orderly manner. Attention is growing in the tidewater coastal region.

Development of established fields was rather rapid. Leading in this work was the Eucutta Field, followed by East Heidelberg, Cranfield and West Heidelberg.

One shallow gas well was the result of seven wildcats drilled in Alabama during the first six months of 1945. The extent of this discovery, in Winston County, is unknown. However, wildcat drilling is on the increase, with ten tests drilling or slated to be drilled. The area within 50 to 100 miles of Gilbertown, only oil field in the state, is receiving most of the play.

Although wildcatting was boosted, Florida remained a one field state. The seven wildcats drilled were failures. The four wildcats completed in Georgia were dry holes.

Rocky Mountains Ordinary

Exploratory development continued fairly active in the Rocky Mountain states in the first half of this year, following relatively good results last year. Although only a few wildcats were completed in Colorado one of them provided a north extension to the Rangely field. Montana's activity resulted in opening of two new oil pools, in Pondera and Toole counties, and in two oil field extensions. Wyoming had 15 exploratory well completions in the first half of this year, the same number as in the like period last year, and among them were five producers which opened three new oil pools and extended two oil fields. The new pool discoveries included Bailey Dome, Carbon County, a small field; Oil Mountain in Natrona County, heavy oil area; and Kirby Creek in Hot Springs County, expected to be small in area. The fields extended were Elk Basin and Half Moon, both in Park County. While these developments in the Rocky Mountains were not out of the ordinary, they were good enough to indicate no let-down in activity during the remainder of the year.

Delhi Leads North Louisiana

An extensive wildcat drilling campaign resulted in increased discoveries in North Louisiana. The Delhi fiield, Richland Parish, opened in January, was rapidly expanded and now is considered the major strike of the year. As a result of this discovery, Richland Parish has been the center of much wildcat activity.

Other oil discoveries were in Caddo, Webster, Bossier, Bienville, Jackson, and LaSalle parishes. Three gas strikes were recorded in Caldwell, Franklin, and DeSoto parishes.

From a field development standpoint, the Lake St. John field, Concordia and Tensas parishes, with important extensions on the Concordia Parish side, held interest.

Look Deep In South Louisiana

South Louisiana added to its laurels as a deep producing area, again cracking the world's producing depth record. However, this achievement contributes little to the small amount of new oil reserves opened so far in 1945.

The new record producer was Shell Oil Company's Smith-State 1, at Weeks Island, Iberia, Parish. The well was finaled on May 9, 1945, through perforations at 15,505-520 feet and flowed 112 barrels of 40-gravity oil daily. A second location has been spotted in the new field.

With only a few new pool discoveries, the major contribution to South Louisiana's new oil reserves was made by the opening of new pay sands and the extension of proven fields. Such new sands and extensions included Humble Oil & Refining Company's Wilbert Mineral Corporation 1-C at Bayou Des Glaise, Iberville Parish, and Shell Oil Company's Lugas-LeBlanc 1-A on the northwest flank of Napoleonville dome, Assumption Parish.

Most of the present drilling in South Louisiana is focused on proven areas with wildcatting being held to a minimum. The deep drilling required by most wildcats may be an important factor in curtailing the wildcatting in this sector.

Illinois Active

With 211 wildcat tests completed in the first six months of the year, 46 new discoveries were made in Illinois. These added ten new oil fields, 16 new pays and 20 extensions of older oil fields. The importance of the discoveries has not been proven, but none appear exceptionally large.

One of the most important strikes was in the proven Woodlawn pool, where the Aux Vases and the Devonian lime were added to the field's producing zones. Other worthwhile finds were extensions of the Bible Grove pool, adding of McClosky lime productions of the Bible Grove, and discovery of the Brownsville pool which later was proved productive in two additional formations.

Best of Kentucky's new discoveries was the Waverly pool and new horizon for the same pool, and the uncovering of the Dixie pool.

There were no important discoveries in Indiana, and the outlook was gloomy.

Exploration activity in Michigan failed to develop an important new field, although drilling rates held about equal to those of the past two years. Six new oil fields and two gas fields resulted from 127 wildcat completions, but at mid-year a second commercial well had not been completed in any of the new areas.

Average Well Depth Greatest in History

Footage drilled surpasses first half of last year by 16 percent, although completions are up only 8 percent, as wells completed average 3568 feet in contrast with the previous record of 3314 feet

THE necessity of drilling deeper to obtain the nation's requirements of petroleum has been sharply accentuated during the past two years, and the average footage drilled per completion was greater in the first half of 1945 than ever before. This was a continuation of a trend which was pronounced also in 1944, when drilling was substantially deeper than in any former year.

The average amount of footage drilled per well to obtain the 12,142 completions of the first six months of 1945 was 3568 feet, compared with 3314 feet for the whole year 1944, and 3051 feet for 1943. The average of 1943 had been close to the general average for the six years, 1938-1943, and was not much greater than for all the years since World War I, as shown in Table 1.

The above figures on average footage drilled per completion are based on all completions recorded by THE OIL WEEKLY's staff, including the relatively small number of wells drilled deeper and the new footage drilled in those wells in the deepening operations. For the first half of 1945 there were only 231 of the wells drilled deeper out of the total of 12,142 total completions, and for those 231 deeepened wells the average amount of new footage drilled was 328 feet per well.

Narrowing data down to new wells only, it is found that for the 11,911 new wells completed in the first half of this year the industry drilled 43,249,271 feet of hole, an average of 3631 feet per well. This average compares with 3356 feet per new well in the first half of 1944

■ CONTINUED ON PAGE 52

Wells Completed and Footage Drilled in U. S.

(Including wells and new footage involved in deepening operations.)

PERIOD	Wells Completed	Footage Drilled	Average Footage Per Well
Year—			
1925	25,406	73,677,400	2900
1926	28,995	81,186,000	2800
1927	22,301	66,903,000	3000
1928	19,964	59,892,000	3000
1929	23,463	67,925,285	2895
1930	19,848	57,557,200	2900
1931	11,716	34,259,110	2924
1932	14,290	43,033,422	3011
1933	13,145	38,464,500	2926
1934	20,793	55,103,538	2650
1935	24,273	66,632,035	2745
1936	28,546	80,068,851	2805
1937	33,945	101,105,230	2979
1938	28,060	87,841,493	3131
1939	27,658	84,114,990	3037
1940	30,656	93,971,162	3065
1941	32,210	95,452,534	2963
1942	21,454	65,179,338	3038
1943	19,245	58,718,164	3051
1944	24,455	81,049,279	3314
1st 6 Months:			
1941	14,444	43,155,572	2987
1942	11,158	34,829,716	3122
1943	8,616	26,251,460	3047
1944	11,219	37,167,881	3313
1945	12,142	43,325,090	3568

Footage and Average Depths Drilled, by States and Districts

State or District	NEW WELLS: COMPLETIONS First Half of Year			NEW WELLS: FOOTAGE DRILLED First Half of Year			NEW WELLS: AVERAGE DEPTH First Half of Year			OLD WELLS DRILLED DEEPER: COMPLETIONS First Half of Year			OLD WELLS DRILLED DEEPER: FOOTAGE DRILLED First Half of Year			OLD WELLS DRILLED DEEPER: AVERAGE DEPTH First Half of Year		
	1941	1944	1945	1941	1944	1945	1941	1944	1945	1941	1944	1945	1941	1944	1945	1941	1944	1945
Alabama	1	14	16	305	62,500	51,105	305	4,464	3,194	....	....	....	.....	.....	.....	....	....	....
Arizona	.....	3	.....	.....	10,240	.....	.....	3,413	.....	....	....	....	.....	.....	.....	....	....	....
Arkansas	80	98	84	326,990	609,842	346,401	4,087	6,223	4,124	....	....	1	.....	.....	59	....	....	59
California	533	957	1,058	3,069,795	3,413,381	4,309,079	5,759	3,567	4,073	....	40	5	.....	45,898	2,561	....	....	512
Colorado	7	12	12	21,614	60,692	66,529	3,088	5,058	5,554	1	....	....	605	.....	.....	605	....	....
Florida	.....	1	9	.....	5,300	58,951	.....	5,300	6,550	....	....	....	.....	.....	.....	....	....	....
Georgia	1	1	4	1,501	4,110	13,273	1,501	4,110	3,318	....	....	....	.....	.....	.....	....	....	....
Illinois	1,537	822	747	3,660,015	2,123,611	1,799,861	2,381	2,583	2,409	121	11	78	67,175	3,549	9,866	5,552	....	126
Indiana	238	133	144	485,519	256,561	224,741	2,040	1,929	1,561	12	1	1	5,324	439	10	444	439	10
Iowa	2	2	1	6,274	3,470	1,250	3,137	1,735	1,250	....	....	....	.....	.....	.....	....	....	....
Kansas	994	858	736	3,122,621	2,900,668	2,452,662	3,141	3,381	3,332	49	7	38	7,463	2,659	7,208	152	380	190
Kentucky	141	345	228	157,891	659,959	439,429	1,120	1,913	1,927	5	2	1	1,148	1,634	9	230	817	9
Louisiana	667	355	481	4,009,314	2,758,646	3,806,350	6,011	7,771	7,913	3	4	2	970	1,672	3,958	823	318	1,979
North Louisiana	241	119	159	713,549	518,992	784,327	2,961	4,361	4,933	2	1	....	460	200	.....	230	200	....
South Louisiana	426	236	322	3,295,765	2,239,654	3,022,023	7,737	9,490	9,385	1	3	2	510	1,472	3,958	510	491	1,979
Michigan	387	303	374	794,248	768,263	970,797	2,052	2,536	2,596	....	5	....	.....	9,622	.....	....	1,924	....
Mississippi	86	70	188	418,268	393,157	1,244,297	4,864	5,617	6,619	....	....	....	.....	.....	.....	....	....	....
Missouri	32	13	20	25,617	9,555	34,233	801	735	1,712	....	....	1	.....	.....	328	....	....	328
Montana	98	153	94	214,026	376,358	247,918	2,184	2,460	2,637	....	....	....	.....	.....	.....	....	....	....
Nebraska	40	7	2	91,113	17,740	7,018	2,278	2,534	3,509	1	....	....	702	.....	.....	702	....	....
New Mexico	166	206	216	477,155	611,454	762,867	2,874	2,968	3,532	2	4	1	1,235	1,470	538	618	368	538
New York	391	621	517	539,624	867,970	692,131	1,380	1,398	1,339	....	....	....	.....	.....	.....	....	....	....
Ohio	784	417	436	1,400,304	1,090,540	1,112,201	1,786	2,616	2,551	3	1	....	2,646	7	.....	882	7	....
Oklahoma	910	838	1,145	2,574,963	2,923,801	4,944,665	2,830	3,489	4,318	105	16	20	30,798	3,520	7,674	293	220	384
Pennsylvania	1,912	1,410	1,437	3,287,986	2,451,783	2,447,839	1,720	1,739	1,703	1	1	10	230	423	6,877	230	423	688
Tennessee	9	7	2	13,318	5,897	5,890	1,479	842	2,945	....	....	....	.....	.....	.....	....	....	....
Texas	4,708	2,865	3,535	17,329,260	13,139,791	15,944,505	3,681	4,586	4,510	37	81	49	25,623	46,765	17,926	692	556	366
East Texas Border	13	11	34	58,568	68,664	218,960	4,505	6,242	6,440	....	....	....	.....	.....	.....	....	....	....
East Texas Field	317	.....	.....	1,144,881	.....	.....	3,611	.....	.....	....	3	....	.....	460	.....	....	153	....
Rest of E. Texas	253	147	107	1,130,008	895,721	697,097	4,466	6,093	6,515	1	....	2	1,874	.....	2,058	1,874	....	1,029
North Texas	1,131	667	818	2,529,275	1,958,650	2,023,645	2,236	2,936	2,474	12	18	9	8,499	9,593	2,439	708	533	271
West Cent. Tex	282	185	228	517,491	445,655	628,289	1,835	2,409	2,756	....	14	2	.....	7,129	2,350	....	509	1,175
West Texas	975	752	911	4,074,532	3,519,478	4,410,813	4,179	4,680	4,842	10	33	23	4,203	18,856	6,541	420	571	284
Panhandle	275	113	283	831,936	369,462	904,282	3,025	3,270	3,195	1	1	5	175	2,273	220	175	2,273	44
Gulf Coast, Upper	371	266	349	2,437,068	1,980,985	2,574,491	6,568	7,477	7,377	....	8	5	.....	5,140	2,432	....	643	486
Gulf Coast, Lower	581	453	510	3,215,762	2,815,617	3,246,097	5,535	6,215	6,365	6	1	2	7,245	67	1,868	1,207	67	934
Southwest Texas	392	222	248	1,170,668	921,106	1,005,838	2,986	4,149	4,056	6	2	1	3,517	2,250	18	586	1,125	18
South Cent. Tex	118	49	47	219,071	164,453	234,993	1,857	3,356	5,000	1	1	....	110	997	.....	110	997	....
West Virginia	314	455	361	815,321	1,166,273	964,755	2,597	2,563	2,672	10	1	24	12,233	1,110	18,805	1,223	1,110	784
Wyoming	48	78	64	147,748	357,400	300,524	3,078	4,582	4,696	8	1	....	8,630	151	.....	1,079	151	....
Total U. S.	14,086	11,044	11,911	42,990,790	37,048,962	43,249,271	3,052	3,356	3,631	358	175	231	164,782	118,919	75,819	460	680	328

Who Is Drilling the Wildcats?

WHO is doing the U. S. wildcatting, which proceeds upon unprecedented scale, in response to the increasingly urgent need for new petroleum reserves?

Are current conditions and controls affecting larger and smaller companies differently with regard to their respective wildcatting programs?

Is it true or false that "independents" do more than their proportionate share of wildcatting?

Or on the other hand, are present conditions such that smaller operators cannot or will not participate in exploration with the same relative vigor that larger companies are doing?

These are some of the questions which have been asked lately with increasing insistence for answers, in view of the accentuated need for new reserves and the threat that frozen crude prices will hold down exploration and discoveries.

Some of these questions are at least partially answered statistically in the accompanying tabulation, which shows the amount of total drilling and exploratory drilling carried out in the first half of this year by 32 of the larger companies and by the remainder of the industry in the aggregate. This is the first such breakdown of wildcatting statistics by companies heretofore attempted by this (and probably any) publication, although records by districts have been maintained now for several years. Although data by companies for earlier years would be desirable for comparison purposes, this initial compilation within itself is very illuminating and affords significant actual figures to help understand the problem of finding necessary new reserves.

During first half of year 32 companies accounted for 31.9 percent of all U. S. completions in all classes

Important among the general facts indicated by results this year is that larger and smaller companies are finding new oil fields in about the same ratios to their respective total drilling. In doing so, however, the smaller concerns have relatively lower success ratio, and in finding their part of the new oil fields they are devoting somewhat larger percentages of their total drilling exploration than are the larger concerns.

In clarification of these statements, figures are cited as follows: Of the wells

Total and Exploratory Wells Drilled in U. S. in First Six Months, 1945, by Some Larger Companies and Rest of Industry

(Note.—Partnership well is ascribed to company whose name is first on drilling report, this precedence usually signifying predominant interest. This procedure tends to compensate, furthermore, for other partnership wells of a company in which its name does not appear first.)

COMPANY	All Wells Completed	Exploratory Wells Completed					CLASS OF PRODUCTION PROVED									‡ Strict Wildcats Completed				
		Total			† Productive		Oil			Distillate			Gas			Total			Productive	
		Number	% of All Wells	*Dry	Number	% of Total Exploratory	New Fields	New Pays	Extensions	New Fields	New Pays	Extensions	New Fields	New Pays	Extensions	Number	% of All Wells	Dry	Number	% of Total Strict Wildcats
Amerada Petroleum Corp	74	20	27.0	15	5	25.0	2	2	..	..	1	..	..	..	..	17	22.9	15	2	11.8
Arkansas Fuel Oil Co	15	4	26.6	4	....	....	..	..	..	..	..	..	..	..	..	4	26.7	4	....	....
Atlantic Refining Co	54	11	20.4	6	5	45.5	1	..	1	1	1	..	1	..	..	9	16.7	6	3	33.3
Barnsdall Oil Co	29	5	17.2	2	3	62.0	..	2	..	..	1	..	..	..	..	2	6.9	2	....	....
Carter Oil Co	79	19	24.1	15	4	21.1	..	..	3	..	..	..	1	..	..	16	20.3	15	1	6.3
Cities Service Oil Co	49	3	6.1	2	1	33.3	1	..	..	..	..	..	..	..	..	3	6.1	2	1	33.3
Continental Oil Co	156	21	13.5	14	7	33.3	2	2	1	1	1	..	..	..	..	16	10.3	13	3	18.8
Deep Rock Oil Corp	26	4	25.4	3	1	25.0	..	..	1	..	..	..	..	..	..	3	11.5	3	....	....
General Petroleum Corp	39	7	17.9	7	....	....	..	..	..	..	..	..	..	..	..	7	17.9	7	....	....
Gulf Oil Corp	293	32	10.9	24	8	25.0	5	1	1	..	..	..	1	..	..	26	8.9	20	6	23.1
Humble Oil & Refg. Co	241	44	18.3	35	9	20.5	4	5	..	..	..	..	..	..	..	36	14.9	32	4	11.1
Lion Oil Refining Co	18	7	38.9	4	3	42.9	..	..	..	..	..	..	2	..	1	5	27.8	3	2	40.0
Magnolia Petroleum Co	197	40	20.3	29	11	27.5	6	2	1	1	..	..	1	..	..	36	18.3	28	8	22.2
Mid-Continent Petroleum Corp	47	9	19.1	9	....	....	..	..	..	..	..	..	..	..	..	9	19.1	9	....	....
Ohio Oil Co	81	7	8.6	5	2	28.6	..	2	..	..	..	..	..	..	..	5	6.2	5	....	....
Phillips Petroleum Co	370	33	8.9	27	6	18.2	3	..	..	1	..	1	..	..	1	29	7.8	25	4	13.8
Plymouth Oil Co	17	4	23.5	4	....	....	..	..	..	..	..	..	..	..	..	4	23.5	4	....	....
Pure Oil Co	147	28	19.0	20	8	28.6	1	2	3	1	..	..	1	..	..	23	15.6	20	3	15.0
Seaboard Oil Co	19	7	36.8	5	2	28.6	1	..	..	1	..	..	..	..	..	6	31.6	4	2	33.3
Shell Oil Co. (Incl. Calif.)	139	27	19.4	17	10	37.0	4	3	2	1	..	..	..	..	..	22	15.8	17	5	22.7
Sinclair Oil Corp. (Sinclair-Prairie; Sinclair-Wyoming)	148	43	29.0	39	4	9.3	1	1	..	1	1	..	..	..	..	41	27.7	39	2	4.9
Skelly Oil Co	93	12	12.9	11	1	8.3	..	..	..	1	..	..	..	..	..	11	11.8	10	1	9.1
Sohio Petroleum Co	114	18	15.8	13	5	27.8	..	1	1	..	..	..	..	3	..	13	11.4	13	....	....
Stanolind Oil & Gas Co	180	33	18.3	22	11	33.3	4	1	1	..	..	..	2	..	3	28	15.5	22	6	21.4
Standard Oil Co., of Calif	316	17	5.4	16	1	5.9	..	..	..	..	..	..	1	..	..	17	5.4	16	1	5.8
Standard Oil Co. of Texas	31	6	19.4	5	1	16.7	..	..	..	..	..	1	..	..	..	4	12.9	4	....	....
Sun Oil Co	203	31	15.3	24	7	22.6	3	4	..	..	..	..	..	..	..	25	12.3	22	3	12.0
Sunray Oil Co	23	4	17.4	3	1	25.0	..	1	..	..	..	..	..	..	..	3	13.0	3	....	....
Superior Oil Co. of Calif	66	8	12.1	7	1	12.5	..	..	1	..	..	..	..	..	..	7	10.6	7	....	....
The Texas Company	440	101	22.9	74	27	26.7	10	5	6	3	..	..	2	..	1	88	20.0	73	15	17.0
Tide Water Associated Oil Co	91	10	11.0	6	4	40.0	2	1	..	..	..	..	1	..	..	9	9.9	6	3	33.3
Union Oil Co. of Calif	83	9	10.8	7	2	22.2	1	..	1	..	..	..	..	..	..	7	8.4	6	1	14.3
Total, 32 Companies	3,878	624	16.1	474	150	24.0	51	35	23	12	5	2	13	3	6	531	13.7	455	76	14.3
(Percent of U.S. Total)	31.9	29.5	....	27.5	38.2	....	32.5	47.3	32.9	80.0	83.3	50.0	27.1	37.5	54.5	28.0	....	27.1	34.5	....
Rest of Industry	8,264	1,494	18.1	1,251	243	16.3	106	39	47	3	1	2	35	5	5	1,366	16.5	1,222	144	10.5
(Percent of U.S. Total	68.1	70.5	....	72.5	61.8	....	67.5	52.7	67.1	20.0	16.7	50.0	72.9	62.5	45.5	72.0	....	72.9	65.5	....
Total United States	12,142	2,118	17.4	1,725	393	18.6	157	74	70	15	6	4	48	8	11	1,897	15.6	1,677	220	11.6

* Besides dry wildcats, this column includes dry outposts and dry new pay tests; however, for whole industry about 97 percent of total shown are strictly wildcats.
† In addition to discovery wells of entirely new fields this column includes successful outposts or major extension wells and wells proving new pays, as shown in detail in columns to the right.
‡ Exclusive of all tests seeking new pay zones or attempting to extend known fields.

completed in the United States in the first half of this year 17.4 percent were exploratory tests, but of the wells completed by 32 larger companies, only 16.1 percent were exploratory, while of those drilled by the remainder of the industry 18.1 percent were exploratory. However, of the total exploratory wells of the 32 larger companies 24 percent were productive against 16.3 percent productive among those drilled by the rest of the industry, to result in an industry-wide score of 18.6 percent productive among all exploratory tests completed.

In doing this drilling, the 32 companies accounted for 31.9 percent of all U. S. completions of all classes, and they found 32.5 percent of the new oil fields discovered. The remainder of the industry accounted for the other 68.1 percent of total U. S. completions, and found 67.5 percent of the new oil fields discovered. Stated in popular slang, the smaller concerns have been finding fields the harder way, getting relatively more dry holes, but by drilling relatively more wildcats, they have succeeding in finding their proportional share of new fields. This reflects the work of the exploration divisions of the larger concerns and the deficiency of technical advice in some of the wildcatting ventures of smaller concerns. However, a relatively higher dry hole ratio among independents may be tempered by lower pre-drilling costs and by the traditional "dry hole money" contributed by larger companies toward wildcat ventures in exchange for geological information revealed by the wildcats involved.

Completion Classified

Figures given above are based on the completion of a total of 12,142 wells of all classes in the first half of this year, of which 2118 were classed as "exploratory" and of which 157 were discovery wells of new oil fields. The 2118 "exploratory" wells were predominantly wildcats in the strict sense of that word, having included 1897 in that category, while the remaining 221 were what might be called semi-wildcats, having been tests seeking to prove new pay zones or to provide major extensions to existing fields by stepping out hazardous distances. In extending oil fields as in finding new ones the larger and smaller companies both had success closely in proportion to their total drilling, although larger concerns showed relatively better results than smaller companies in establishing new oil pay horizons.

New Gas Pays

New pays and extensions for gas and distillate fields were too few for the whole industry for statistics on larger and smaller companies to be of much significance. In finding entirely new distillate fields the larger companies showed relatively more discoveries than the smaller companies, perhaps because of the depth and expensiveness of most wells that yield distillate production. But the smaller companies have been opening relatively more gas fields than the larger companies, although many of the gas strikes are only half-successful in that operators were seeking oil.

When the statistics on exploratory drilling are narrowed down to strict wildcats, with tests for new pays and outpost tests eliminated, it is found that out of the 12,142 total completions of all classes in the United States in the first half of this year 1897 or 15.6 percent were such strict wildcats. Of the total wells drilled by the 32 larger companies, 13.7 percent were strict wildcats, while of the total wells drilled by the remainder of the industry 16.5 percent were strict wildcats. Here again the smaller companies drilled relatively more wildcats than the larger concerns. But of the strict wildcats of the 32 companies 14.3 percent were productive, having found entirely new oil, gas, or distillate fields, while of the strict wildcats drilled by the rest of the industry only 10.5 percent were discovery wells of entirely new fields. (For the industry as a whole, 11.6 percent of the total strict wildcats drilled were successful in discovering new fields.) Therefore, in net results, the larger and smaller companies were about equally successful, in relation to their total drilling, in putting new fields of all classes upon the maps.

Wildcatting Hazards

While the 32 larger companies have been grouped for the purposes of the above discussion, examination of data for those companies individually reveals widely varying results. Some of those companies have had results very close to the averages for the industry as a whole and others fell below the industry averages, although the majority showed better than average results. These results give evidence of the inherent hazards in wildcatting, which may cause the ratio of success to vary widely as between companies and as between different periods of time for a given company. The volume and geographical distribution of the wildcatting also are naturally important factors.

Companies drilling larger number of wells tend, as might be expected, to show results closer to the national average success, and this is especially true for the larger companies that drill more extensively geographically. On the other hand, some of the companies doing limited drilling had irregular wildcatting results, and some whose drilling is restricted geographically experienced results peculiar to the areas involved, as in the cases of several Mid-Continent and West Coast concerns which have had relatively unfavorable results this year in line with general lagging of discoveries in the areas where they operate.

Directors and Officers Are Elected by Cosden

Cosden Petroleum Corporation elected directors July 16 at Big Spring, Texas, as follows: James L. Carey, A. V. Karcher, Marvin M. Miller, Leo M. O'Neil, Nelson Phillips, B. H. Roth, and R. L. Tollett. Officers elected were: R. L. Tollett, president, for his sixth one-year term; Marvin M. Miller and J. B. Mull, vice presidents in charge of distribution and manufacturing, respectively; A. V. Karcher, secretary and treasurer; C. F. Dyckmans, assistant treasurer; V. A. Whittington, assistant secretary and assistant treasurer; Nelson Phillips, general counsel and assistant secretary.

Footage

■ CONTINUED FROM PAGE 50

and 3052 feet in the first six months of 1941.

By reason of the increased average drilling depth, the amount of footage drilled in the United States in the first half of this year, totaling 43,325,090 feet, was 16.6 percent greater than that of 37,167,881 feet drilled in the first half of last year, although the number of wells completed rose only to 12,142 from 11,219, an increase of 8.2 percent.

The increases this year and last year in average footage drilled per completion have been due to sharply increased development in California and in Texas and other states of the Southwest, where wells are materially deeper than the national average. Activity has been expanded relatively more in those deeper areas than in the shallower fields of the Appalachian, Middle Western, and Mid-Continent areas, some of which have had fewer completions this year than last year. Furthermore, in the latter areas some of the individual states or districts which have shown increases in drilling have done so through development of new, deeper fields. Oklahoma, for example, has had a substantial increase in drilling over last year, and much of the development has been in new deep fields, as evidenced by an average drilling depth of 4318 feet per well for the new wells of January-June, 1945, compared with an average of 3489 feet for those of the like period last year.

Greatest Depths

Greatest average drilling depths continue to be recorded in the far-flung belt along the Gulf of Mexico, where possibilities of production still are limited only by the depths to which the drill can be carried.

South Louisiana remains firmly in first place among all districts from the standpoint of deep drilling, as the 322 new wells completed there in the first half of this year averaged 9385 feet deep, although this was a slight decrease from the 9490-foot average of wells completed in the like period last year.

The adjacent upper Gulf Coast of Texas remains the area of second deepest development, with an average of 7377 feet per well for new well completions this year.

Mississippi has moved into third place among deep-development areas, having shown this year an average completion depth of 6619 feet for 188 new wells Florida, with nine completions, recorded an average depth of 6550 feet. East Texas also has relatively deep development, as the counties along the border averaged 6440 feet per well for 34 completions and the rest of the section, 6513 feet for 107 wells. On the lower Gulf Coast of Texas the average was 6365 feet per well for 510 completions. Outside the coastal belt and the East Texas basin the deepest wells being drilled in Texas are in the Permian basin, West Texas having shown this year an average depth of 4842, which was above the average of 4510 feet for the state as a whole.

Although California has some deep fields, twhich gave it an average drilling depth of 5759 feet in the first half of 1941, the average was only 4073 feet per well in the similar period this year, since a substantial part of development was that at Elk Hills field, where most of the wells were completed at depths of less than 3500 feet.

Exploratory Drilling Record To Be Near PAW Goal for 1945

Exploratory completions for first six months average 81.5 per week, an increase of 7.7 percent over the 75.7 weekly recorded for the first half of last year

IN THE first 6 months of this year exploratory well completions averaged 81.5 per week, an increase of 7.7 percent over the 75.7 weekly recorded for the first half of last year.

If this same increase of 7.7 percent should be recorded for this whole year, the total of exploratory completions would be about 4600. While that would not equal the number sought by the Petroleum Administration for War, it would be fairly close to the goal, which is 5000.

While the number of exploratory well completions is running above last year as stated, the success ratio has been practically the same as last year from the standpoint of number of discoveries, 18.7 percent having been productive against 18.6 percent in the first half of last year. Therefore, this year has brought some increase in successful as well as total exploratory completions.

If it is assumed that the quality of discoveries of 1945 has been equal to the quality of last year's discoveries, it may be concluded that the United States this year has been proving up approximately the same amount of new oil as it has been consuming. For that was the experience during 1944, and while consumption is higher this year, discoveries are somewhat more numerous.

This year's record compares favorably with that of last year in nearly all categories of exploratory results. Discoveries of new oil have been more numerous in each of the three classifications: new fields, new pay zones, and major extensions of existing fields. Discoveries of new fields and new pay zones yielding gas-distillate have exceeded those last year and extensions have been nearly as numerous. Likewise, there have been more discoveries of gas fields and gas pays than last year, although gas field extensions have been somewhat less numerous.

Although the country as a whole has had the moderate increase in exploratory drilling, some states and districts have experienced fairly sharp increases while others have shown declines. Mississippi has had nearly twice as much

Results of Exploratory Drilling in June and First 6 Months, 1945-1944, By Districts.

State or District	JUNE, 1945														FIRST SIX MONTHS, 1945															
	Productive Tests									Unproductive Tests			Total Exploratory Tests		Productive Tests								Unproductive Tests					Total Exploratory Tests	
	New Fields			New Pays			Extensions			Total Productive					New Fields			New Pays			Extensions			Total Productive				Total Dry			
	Oil	Gas	Dis.	Oil	Gas	Dis.	Oil	Gas	Dis.		Wildcats	New Pays	Outposts		Oil	Gas	Dis.	Oil	Gas	Dis.	Oil	Gas	Dis.	6 Mo. 1945	6 Mo. 1944	Wildcats	New Pays	Outposts	6 Mo. 1945	6 Mo. 1944	6 Mo. 1945	6 Mo 1944
Alabama											3			3		1								1	1	8			8	5	9	6
Arizona											3			3															3		3
Arkansas																									6	23	1	1	25	23	25	29
California	1									1	30		1	32	3			1			2			6	22	144		2	146	137	152	159
Colorado																					1			1	2	2			2	4	3	6
Florida											1			1												9			9	1	9	1
Georgia											1			1												4			4	1	4	1
Illinois	2			3			1			6	42			48	10			16			20			46	34	165			165	160	211	194
Indiana		1		2						3	5			8	1	1		2			1			5	6	47			47	22	52	28
Iowa																										1			1	2	1	2
Kansas	2			1			1			4	32			36	23	5		3			10	4		45	36	161			161	216	206	252
Kentucky	2			1						3	3			6	6			1			2			9	16	39			39	59	48	75
Louisiana	3	2		1				1	1	8	13			21	13	4		11		4	3	1	1	37	19	71		1	72	70	109	89
North Louisiana	3	2						1		6	5			11	4	4					2	1		11	6	41			41	41	52	47
South Louisiana				1					1	2	8			10	9			11		4	1		1	26	13	30		1	31	29	57	42
Michigan				2						2	20		1	23	6	2		3	1		1			13	5	110	1	3	114	108	127	133
Mississippi											9			9		1	2				1			4	1	61			61	36	65	37
Missouri											3			3								1		1		13			13	1	14	1
Montana															2						2			4	2	4			4	8	8	10
Nebraska																										2			2	2	2	2
New Mexico				1						1	5	1		6	2	1		2	1		1			7	4	32	1		33	26	40	30
Ohio		1								1	5			6		9			1		1	3		14	23	33			33	32	47	55
Oklahoma	6	2		3	2		1			14	29			43	28	6	1	7	4		11	1		58	28	152			152	109	210	137
Tennessee																										1			1	3	1	3
Texas	7	5		4			1	1		18	113	2	2	135	60	18	12	28	1	2	12	1	3	137	166	588	22	13	623	630	760	796
E. Texas Border											1			1											5	8			8	5	8	10
Rest of E. Texas											6			6	2	1				1				4	9	33	2	2	37	67	41	76
North Texas	4	1		1						6	29			35	12	1		7	1		1			22	36	147	4	1	152	153	174	189
West Central	1	1								2	14	1		17	7	4		2						13	11	61	4		65	51	78	62
West Texas	2			2			1			5	17	1		23	13			8			7			28	22	109	8	5	122	97	150	119
Panhandle																										4			4	5	4	5
Upper Coast		1								1	16			17	6	4	6	9		1	4		2	32	21	61	4	3	68	62	100	83
Lower Coast		1		1				1		3	14			17	13	6	5	1				1	1	27	40	90			90	81	117	121
Southwest		1								1	10		1	12	5	2	1	1						9	21	55		1	56	83	65	104
South Central											6		1	7	2									2	1	20		1	21	26	23	27
Utah																																
West Virginia																													1		1	
Wyoming															3						2			5	10	7		3	10	5	15	15
Total U. S.	23	11		18	2		4	2	1	61	317	3	4	385	157	48	15	74	8	6	70	11	4	393	381	1677	25	23	1725	1664	2118	2045

ACCURACY

The currently high ratio of productive completions to exploratory tests is a tribute to the accuracy of the reflection seismograph in approving or condemning acreage for oil prospecting. As compared with the corresponding period of a year ago, the percentage increase of productive completions is three times greater than the percentage increase of exploratory tests. The record becomes more significant when it is considered that this increase is due largely to the discovery of new fields, rather than extensions or new sands. For almost a decade General Geophysical Company has helped keep new discoveries on the upward trend by the improvement of equipment, the refinement of techniques and advancements of the skill in obtaining and interpreting sub-surface data. As a result, General is prepared to meet the more exacting demands required for accurately mapping structures today.

General

GEOPHYSICAL COMPANY GGC HOUSTON

ACCURACY — DEPENDABILITY — ADVANCED EQUIPMENT — EXPERIENCE

Summary of Results of Exploratory Drilling

ITEM	June, 1945	May, 1945	JANUARY-JUNE 1944	JANUARY-JUNE 1945	Percent Diff.
Oil Discoveries	41	32	223	231	+ 3.6
New Fields	23	25	150	157	+ 4.7
New Pays	18	7	73	74	+ 1.4
Distillate Discoveries	.....	4	19	21	+ 10.5
New Fields	.....	2	13	15	+ 15.4
New Pays	.....	2	6	6	.....
Gas Discoveries	13	6	54	56	+ 3.7
New Fields	11	6	47	48	+ 2.1
New Pays	2	.....	7	8	+ 14.3
Total Discoveries	54	42	296	308	+ 4.1
Extensions to Fields	7	21	85	85	.....
Oil Fields	4	19	60	70	+ 16.7
Distillate Fields	1	1	6	4	— 33.3
Gas Fields	2	1	19	11	—42.1
Total Prod. Tests	61	63	381	393	+ 3.1
Dry Holes	324	319	1,664	1,725	+ 3.6
(Weekly Average)	81.0	63.8	61.6	66.3	+ 7.6
Wildcats	317	315	1,620	1,677	+ 3.5
New Pays	3	2	10	25	+150.0
Outposts	4	2	34	23	— 32.4
Total Expl'tory Tests	385	382	2,045	2,118	+ 3.6
(Weekly Average)	96.3	76.4	75.7	81.5	+ 7.7
Percent Productive (Weekly Average)	15.6	16.5	18.6	18.7	.....
Percent Dry (Weekly Average)	84.4	83.5	81.4	81.3	.....

Dry hole completions are from weekly reports and totals represent completions for 4 weeks in June, 1945; 5 weeks in May, 1945; 27 weeks in Jan.-June, 1944 and 26 weeks in Jan.-June, 1945.

exploration as last year, while Alabama, Florida, and Georgia also have shown substantial increases in consequence of the successful results obtained last year and this year in the Southeastern States. Oklahoma, too, has had a noteworthy stimulation of wildcatting through good wildcatting results. Wyoming has been relatively active, although Colorado and Montana have shown declines.

In the Middle West results have been sufficiently satisfactory to encourage more wildcatting than last year. Increases are indicated for Illinois, Indiana, and Michigan, although Kentucky has been less active than last year.

Arkansas and Kansas have had fewer wildcat completions than in 1944 but Missouri and Nebraska more.

Both the northern and southern districts of Louisiana have had more wildcatting than last year and so has New Mexico, although Texas shows some decline. Among the Texas districts only three have been more active than in 1944, namely, West and West Central Texas and the upper Gulf Coast.

Results in June

The month of June brought increased wildcatting and results were comparatively good both as to number and quality of discoveries. Exploratory completions averaged 96.3 per week against 76.4 weekly in the previous month and 81.5 weekly for the first 6 months of this year as a whole. Of the completions 15.6 percent were successful, a lower ratio than the 16.5 percent for May and the 18.7 percent for January-June, 1945.

California gained a small new oil field in Los Angeles County, but that was the only productive well among 32 exploratory completions. The Rocky Mountain States gained no new oil, although a new pay of minor importance was reported for southeastern New Mexico.

In the Middle West results were fair. Illinois scored 2 new oil pools, 2 extensions, and 3 new pays in pools out of 48 exploratory tests. Indiana gained a gas field and 2 new oil pays against completion of 5 dry wildcats. In Kentucky 2 oil pools were opened and 1 pool gained a new pay while 3 wildcats were abandoned. Michigan's 23 exploratory completions netted a new pay in each of 2 pools. Mississippi, Alabama, Georgia, and Florida all had wildcat completions but all were dry.

Out of 36 exploratory completions Kansas gained 2 new oil fields, 1 new oil pay in an established field, and 1 oil field extension, the new field being a promising strike in Sumner County. Oklahoma had a good month as 43 exploratory completions included 14 that were productive. Of the 14 producers 10 yielded oil, 6 having opened new fields while 1 extended a field and 3 found new pays in existing fields. Of 4 gas discoveries, 2 were new fields and 2 were new pay zones in proved fields. A considerable number of the Oklahoma strikes were considered important.

South Louisiana recorded no discoveries of new fields, but out of 10 exploratory completions 1 opened a new pay zone and 1 extended a field. North Louisiana's 11 completions provided 3 new oil fields, 2 gas fields, and 1 gas field extension.

Texas had a subnormal month in June, as only 18 out of 135 exploratory completions were successful. The 7 new oil fields discovered were in North, West Central, and West Texas, and none was of exceptional importance. Four new oil pay zones were proved in North Texas, West Central Texas, and the lower Gulf Coast, while West Texas had an oil field extension. Five new gas producing areas were discovered, including 1 each in North, West Central, and Southwest Texas and the upper and lower sections of the Gulf Coast, and a gas field on the lower coast was extended.

Natural Gas May Eliminate Oklahoma Town's City Taxes

Natural gas may help to reduce or even eliminate all taxation in the town of Guymon, Texas County, at the southern end of the Oklahoma sector of the big Hugoton gas area. Citizens are responding to a plan sponsored by the city council and the Guymon Chamber of Commerce under which property owners are unitizing their lots to drill a gas well. More than 200 property owners have agreed to lease their land for $1 per lot bonus to J. M. Kessler and associates of Oklahoma City. Lot owners have asssigned their royalty to the city council which will use the proceeds to reduce or entirely do away with city taxes.

Table at right and on two following pages shows productive wildcats completed in June, 1945. Similar tables for earlier months have been published in the fourth or fifth issues of preceding months.

New Oil and Gas Fields and New Pay Horizons Discovered in the United States in June, 1945

Also Important Extensions to Established Fields

COUNTY	FIELD	COMPANY, WELL AND LOCATION	Date Spudded	Date Completed	Total Depth (Feet)	Completion Horizon (Feet)	[1]Name, Character and Age of Producing Formation	[2]Initial Production Method and Choke	Gravity of Oil	[3]Structure; [4]Method of Discovery	Tentative Evaluation of Discovery of Extension (Opinion of Relative Importance of Area from General Viewpoint of the Industry Based on Pertinent but Necessarily Incomplete Data. Later Development or More Complete Data Obviously Might Require Revision of this Tentative Opinion).
		CALIFORNIA—New Oil Field									
Los Angeles	Sansinena	Union Oil Co.'s Sansinena 15, 30-2s-10w, between Whittier and La Habra	.....	7-13-45	3595	3346-3591	Middle Puente; U. Mio	P125, 0.4% wtr, 89 min	22.9	.....	Possible productive area not extensive.
		ILLINOIS—New Oil Fields									
Clinton	Shattuc	Murphy-Conrey's L. Noller 1, ne ne ne 28-2n-1w	5-13-45	6-12-45	1286	1279-1286	Cypress sd; Miss	P 25	....	.....	2 mi nw Centralia pool. First commercial well in area in which several dry holes had strong shows in Cypress and Benoist. Pool may be 300 acres.
Richland	Seminary	J. W. Carter's D. C. Borah 1, nw ne nw 20-2n-10e	5-23-45	6-26-45	3202	3199-3202	McClosky li; Miss	P 224	....	.....	1¾ mi s Calhoun pool, which also prod fr McClosky li. Nearest dry holes in other directions more than 2 mi distant.

New Oil and Gas Fields and New Pay Horizons Discovered in the United States in June, 1945

Also Important Extensions to Established Fields

COUNTY	FIELD	COMPANY, WELL AND LOCATION	Date Spudded	Date Completed	Total Depth (Feet)	Completion Horizon (Feet)	[1]Name, Character and Age of Producing Formation	[2]Initial Production Method and Choke	Gravity of Oil	[3]Structure: [4]Method of Discovery	Tentative Evaluation of Discovery of Extension (Opinion of Relative Importance of Area from General Viewpoint of the Industry Based on Pertinent but Necessarily Incomplete Data. Later Development or More Complete Data Obviously Might Require Revision of this Tentative Opinion).
		ILLINOIS—New Oil Pays									
Effingham	Bible Grove	Ashland's F. Wiebking 2, nw se ne 29-6n-7e	5-16-45	6-26-45	2848	2842-2846	Rosiclare li; Miss	P 165	....	.....	Located on extreme nw edge of pool. On basis of available data it seems likely that pay here reported as Rosiclare may be same as that previously reported in offset well as McClosky.
White	Brownsville	Pure's G. C. Turner 2, se nw se 31-53-9e	5-18-45	6-19-45	2949	2782-2795	Cypress sd; Miss	P 31, 2 wtr	....	.....	Shallowest pay in pool. Has carried good shows of oil in most of well prod fr deeper pays.
		ILLINOIS—Oil Field Extensions									
Clay	Kenner	J. J. Lynn's A. Craft 1, nw nw se 36-3n-5e	4-12-45	6-19-45	2970	2928-2937	McClosky li; Miss	P 7, 100 wtr	....	.....	½ mi sw extension and new, deeper pay. Previous prod fr Tar Springs, Bethel and Aux Vases sds.
Wayne	Johsonville Consol.	Davis' 1. Lowe 1, s½ se ne 5-1s-6e	.....	6- 5-45	3324	3237-3244	McClosky li; Miss	P 27	....	.....	½ mi extension to pool. Old well orig comp 1-14-41 as dry hole.
		INDIANA—New Gas Field									
Posey	Unnamed	J. T. Peek's Reineke 1, sw ne 12-6s-13w	.....	6- -45	780	772- 780	Pennsylvanian sd; Miss	F 1.650 mln	....	.....	Only gas pool discov in state in 1st 6 mos of 1945.
		INDIANA—New Oil Pays									
Posey	S. New Harmony	Sinclair-Wyoming Oil Co.'s Elliott 4, sw ne sw 14-5s-14w	.....	6- -45	2442	2232-2240 2435-3442	Tar Springs sd; Miss Hardinsburg sd; Miss	P 250	....	.....	Tar Springs new pay for pool. Should give area new drilling incentive.
Posey	Point	Sinclair-Wyoming Oil Co.'s Dora Nash 1, sw sw ne 32-7s-14w	.....	6- -45	2913	2721-2734 2739-2743	Aux Vases sd; Miss O'Hara sd; Miss	P 18, 6 wtr	....	.....	Probably will increase drilling since Aux Vases disc as pay for first time in pool. However, production not encouraging.
		KANSAS—New Oil Fields									
Barton	Unnamed	Black-Marshall Oil Co.'s Miller 1, sw sw se 3-16s-12w, 1 mi w Kraft-Prusa pool	.....	6-28-45	3345	3342-3345	Arbuckle li; Camb	P 117, 20 wtr	36	Str, trp; dr	Undetermined; Arbuckle li fairly porous.
Sumner	Perth	Carter Oil Co.'s Latimer 1, csw ne 12-33s-2w, 1¼ mi ne Perth	.....	6-24-45	4278	4260-4265	Simpson sd; Ord	P 157	47	Ant; seis	Important strike; revives interest in area n of Nemaha Ridge.
		KANSAS—New Oil Pay									
Cowley	Seacat	Deep Rock Oil Copr.'s Seacat 1, nw ne nw 26-33s-4e	.....	6-11-45	3108	3103-3108	Layton sd; Penn	P 10	....	Ant; dr	Unimportant.
		KANSAS—Oil Field Extension									
Barton	Carroll	Yellow Cab Co.'s Carroll 1, sw ne se 21-17s-14w, ½ mi e Carroll pool	.....	6- 2-45	3370	3356-3370	Arbuckle li; Cam	P 150	39	Str, trp; dr	Proves 320 ac e of Carroll pool.
		KENTUCKY—New Oil Fields									
Daviess	Unnamed	Snyder-Slaughter's Hollis 1, 9-Q-30	.....	6- -45	872	820- 830	Tar Springs sd; Miss	P 8	....	.....	.....
Union	Unnamed	Cook-Locke's Proctor 1, 4-P-20	.....	6- -45	1190	909- 915	Pennsylvanian sd; Miss	P 8	....	.....	.....
		KENTUCKY—New Oil Pay									
Union	Waverly	Ashland Oil & Ref. Co.'s Verona Coal Co. "B", 7-O-21	.....	6- -45	2551	2536-2551	Aux Vases sd; Miss	P 61	....	.....	Drilling should be on upswing in pool. Disc of pool and new pay one of best in state this year.
		NORTH LOUISIANA—New Oil Fields									
Bienville	Sailes	Ohio Oil Co.'s Woodward Walker 1, 30-17n-7w	3- 6-45	5- 8-45	7011	6799-6860	Pettit li; Cre	F 177; $\frac{A}{16}$"	....	Geol; seis	Has daily allowable of 117 bbls.
Bossier	Unnamed	J. R. Hayden, Trustee's Ellerbe 1, (OWDD) 3-20n-13w	12-20-44	6- 4-45	6022 otd 9016 td	8034-8057	Cotton Valley "D" sd; Jur	F 20, 8 sw, 0.3 mln; ¼"	....	.....	3 mi nw Benton fld disc well.
Webster	N. Shongalos	Hunt Oil Co.'s Mrs. O. G. Roberts 1, 11-23n-10w	8-30-44	6-18-45	11760	5734-5746	Pettit li; Cre	F 90.88; $\frac{7}{16}$"	38.7	.....	Near Arkansas state line. Sand sect sml.
		NORTH LOUISIANA—New Gas Fields									
Caldwell	Vixen	Shell's Louisiana Central O&G Co. 1, 31-5n-3e	.....	5-20-45	11615	9510-9584	Pettit li; Cre	F 9.6 mln; $\frac{3}{4}$"	....	Refl	Second test has been started.
Jackson	Chatham Area	Shell's Tremont Lbr. Co. 1, c nw se 22-15n-1w	7-28-44	5-22-45	10300	9580-9620	Travis Peak sd; L. Cre	F 8.0 mln; $\frac{5}{32}$"	....	.....	Fuel being used to drill second test.
		NORTH LOUISIANA—Gas Field Extension									
De Soto	Logansport	Ark-La Gas Co.'s D. P. Furlow 1, 25-12n-16w	3-19-45	6- 6-45	6782	5974-6023	Pettit li; Cre	F 165.0 mln; open	....	Ant; geol	.....
		SOUTH LOUISIANA—New Oil Pay									
Acadia	Bayou Mallet	Union Sulphur's Geo. P. Bradley 1, 2930.9 w 4058.9 n of sec irreg sect 52 in 51-7s-1e.	4-21-45	6- 2-45	9712	8538-8545	Lower Marginulina sd; Mio	F 160; $\frac{7}{64}$"	36.1	Prob deep seated D; refl, seis	Shows of oil and gas found at 6400, 7570 and 8475 ft.
		SOUTH LOUISIANA—Distillate Field Extension									
St. Landry	Shuteston	Claude F. Morgan's Frank Dimmick 1, 1650 n 80° 45 mins w 340 n 9° 15 mins e of sec of 173-7s-4e.	.....	1-17-45	10414	10367-10375	Chickasahway sd; Olig	F 32; $\frac{A}{32}$"	51	Dlt; seis	May later develop disc of new structure. Dry hole dr between this well and reg fld. At present adds very little to fld.
		MICHIGAN—New Oil Pays									
Isabella	Broomfield	Wicklund Dev. Co.'s Hein 1, se se se 13-14n-6e	3-22-45	7- 5-45	3856	3156-3160	Traverse li; Dev	F 21, trc wtr, 0.77 mln	41	Geol	Sml pool; between 2 shallow (1600 ft) Stray sd gas flds.
Osceola	Cedar	Ohio Oil Co.'s Boettcher 1, s½ nw se 28-18n-9w	4- 6-45	7- 3-45	5160	5100-5160	Richfield dolo; Dev	F 48	46	Geol	.....
		NEW MEXICO—New Oil Pay									
Lea	Drinkard	Texas Co.'s A. H. Blinebry 1, c sw se 19-18s-38e, ne/o to 6400-ft Yeso disc	1-21-45	6-30-45	7517	5580-5625	Upper Clear Fork li; Perm	F 135, 24 wtr, 11.7 mln; 3"	43	Ant; geol	Considered stray pay; not likely to embrace substantial area. Estabs 3rd pay for fld.
		OHIO—New Gas Field									
Muskingum	.....	Ohio Fuel's Mary Butler 1, sec 5 Newton twp	.....	6-15-45	3508	3457-3502	Clinton sd; Sil	F 0.332 mln	....	.....	.....
		OKLAHOMA—New Oil Fields									
Garvin	Antioch	Cities Service Oil Co.'s Abernathy 1, se sw se 13-3n-2w, 4 mi se Antioch	.....	6-29-45	5502	5494-5502	Bromide sd; Ord	P 220, 1.5 mln	41	Ant; seis	Important disc; structure covers approx 2500 acs.
Oklahoma	Unnamed	Apex Drilling Co.'s McKee 1, nw sw 23-14n-4w, abt 5 mi se Lockridge	.....	6-23-45	6935	6312-6327	Bartlesville sd; Penn	P 60	....	Ant	Fairly good; structure may cover 160 acs.
Osage	Unnamed	W. W. Henry's Osage 1-3, se sw nw 7-23n-9e, 1½ mi w Bandwheel pool	.....	6- 6-45	2166	2110-2166	Hominy sd; Penn	F 100	38	Ant; seis sub	Will cover sml area but likely very productive.
Osage	Unnamed	Wilcox Oil Co.'s Wister 1, sw se nw 15-22n-8e, in Hominy District	.....	6-15-45	2550	2531-2567	Burgess sd; Penn	F 160	38.5	Ant; sub	Good strike; proves abt 640 ac; prod to e and s, leaving n and w open for development.
Payne	Unnamed	Northern Ordnance, Inc.'s DeWitt 1, ne sw sw 34-20w-4e, abt 2 mi se Glencoe pool.	.....	6- 2-45	3585	3569-3575	Burbank sd; Penn	P 35, 35 wtr	33	Ant; seis	Undetermined but appareatly sml.
Tillman	S. Frederick	Texas Co.'s Smith 1, nw nw se 36-2s-18w, 1½ mi w Frederick pool	.....	6- 2-45	5428	2990-3070	Canyon li; Penn	P 7, 27 wtr	....	Ant; sub	Not considered important.
		OKLAHOMA—New Gas Fields									
Pittsburg	E. Ulan	Public Service Co.'s Travis 1, cnw ne 5-7n-14e, 2½ mi e Ulan	.....	6- 2-45	1987	1867-1919	Booch sd; Penn	F 3 mln	....	Ant; seis	*May cover a sect; fairly good gas strike.*
Pottawatomie	Unnamed	Cities Service Oil Co.'s Hoffman 1, se ne ne 34-6n-3e, 4½ mi se of Wanette	.....	6- 6-45	3646	3432-3470	Wanette sd; Penn	F 3.640 mln	....	Ant, D; seis	*Likely to cover sml area.*
Caddo	Cement	**OKLAHOMA—New Oil Pays** H. W. Snowden's McDonald 1, nw nw se 3-5n-9w in tws sect of Cement pool	.....	6- 6-45	4373	4102-4160	Middle Rowe sd; Penn	F pot 5000; 2½"	....	Ant; dr	Important; 7 additional wells planned immediately; good oil/gas shows in Noble-Olson sd at base of Permian.

Pittsburg.. Pottawatomie	E. Ulan..... Unnamed.....	**OKLAHOMA—New Gas Fields** Public Service Co.'s Travis 1, cnw ne 5-7n-14e, 2½ mi e Ulan Cities Service Oil Co.'s Hoffman 1, se ne ne 34-6n-3e, 4½ mi se of Wanette	....	6- 2-45 6- 6-45	1987 3646	1867–1919 3432–3470	Booch sd; Penn Wanette sd; Penn	F 3 mln F 3.640 mln	....	Ant, D; seis Ant; dr	Likely to cover sml area.
Caddo.....	Cement.....	**OKLAHOMA—New Oil Pays** H. W. Snowden's McDonald 1, nw nw se 3-5n-9w in tws sect of Cement pool	.....	6- 6-45	4373	4102–4116	Middle Rowe sd; Penn	F pot 5000; 2½"	....	Ant; dr	Important; 7 additional wells planned immediately; good oil/gas shows in Noble-Olson sd at base of Permian.
Cleveland..	W. Moore....	Wood Oil Co.'s Siler 1, sw se ne 30-10n-3w in W. Moore pool	.....	6-29-45	8865	7835–7890	Bartlesville sd; Penn	F 511; ¼"	38	Ant; seis	Important: estab Bartlesville prod which appears richer than Wilcox sd zone; several dry wells in Wilcox being reworked for Bartlesville sd possibilities.
Payne.....	Ramsey.....	Mid-Continent's Columbia 3, nw ne sw 18-18n-2e, in old Ramsey pool	.....	6- 5-45	4824	4756–4790	2nd Wilcox sd; Prd.	F 500; 12/64"	....	Ant; dr	Important; 2nd Wilcox sd lies abt 15 ft below 1st Wilcox which has been prod for many yrs; well logged 44 ft saturated sd with 23 ft showing odor and some saturation.
Beckham..	Erick.....	**OKLAHOMA—New Gas Pays** Skelly Oil Co.'s Baldwin 1, se ne ne 10-9n-25w, in old Erick gas pool	.....	6-10-45	7559	6786–6810	Arkosic li; Penn	F 22 mln	....	Ant; dr	Important new gas horizon in old fld which previously prod only fr Permian beds at approx 2400 ft.
Logan.....	Crescent.....	Magnolia's Stobaugh 2, enw sw 13-17n-4w	.....	6-22-45	4935	4902–4935	Layton sd; Penn	F 17 mln	....	Ant; dr	First Layton sd gasser in Crescent pool.
Osage.....	S. Hickory Creek	**OKLAHOMA—Oil Field Extension** A. G. Oliphant's Osage 1, ne ne nw 21-28n-11e, ½ mi se of S. Hickory Creek pool	.....	6- 2-45	1085	1055–1085	Wayside sd; Penn	F 100	36	Ant; sub	Proves approx 300 acs to se of S. Hickory Creek pool.
Brooks.....	Gyp Hill.....	**LOWER TEXAS GULF COAST—New Gas Field** Texas Co.'s Mary M. Lasater 3, 4620 fr e&nl 2600.86-ac lse, Loma Blanca, Francisco Guerra Chappa Gr, Burton & Danforth subdvn of Parrita Rch, 4175 e se well No. 2	3-16-45	6- 1-45	8518	6655–6670	Frio sd; Olig	F 28,28% wtr, 4.5 mln (open); 4/16"	....	D; geol	Prospects now point only to gas prod. Humble drilling important well to se which may alter picture.
Jim Wells	N. Magnolia City	**LOWER TEXAS GULF COAST—New Oil Pay** Edwin M. Jones' J. E. Bennett 5, 467 fr wl of tr 2 934 n of well No. 1, 509-ac lse, Roberts & White subdvn	4-30-45	5-30-45	5700	5492–5500	Presnall sd; Olig	F 263.49; 11/64"	37.5	Flt; refl, seis	Faulted area. 6th sand for fld.
Bee.....	Burnell.....	**LOWER TEXAS GULF COAST—Gas Field Extension** Navarro Oil Co.'s Forrest A. Dahl 1, 1552.75 fr nw&sel 466 fr swl 229.07-ac tr, G. Fagan sur, ¾ mi sw of prod	2-20-45	6-18-45	7013	6985–6993	Wilcox sd; Eoc.	Open F 7.2 mln	....	Flt, ant; seis	Lower than reg Burnell fld wells. May later develop to be separate pool.
Wharton...	Egypt.....	**UPPER TEXAS GULF COAST—New Gas Field** Hudgins, Ferguson & Hudgins' F. B. & Donald Duncan 1, 5150 fr m/sly/sl 1800 fr wly/el of Alexander Edgar sur, 3000-ac lse	4-21-45	5- -45	4012	2821–2828	Oakville sd; Mio	Dry; ⅜"	....	Flt; geol	Dry gas well. Second well also made gas.
Cooke.....	.....	**NORTH TEXAS—New Oil Fields** Hollandsworth Drilling Co.'s W. A. Mathews 1, 1400 ft ewl and 330 ft snl of Robt. Ekey sur A-357, ⅔ mi n of Gatewood pool, but separated by failures	5- 4-45	6-17-45	1548	1543–1548	Strawn sd; Penn	P 80	....	Ant; geol.	Not important; probably sml prod area; such wells have good pay-out record.
Throck-morton	.....	Guinn-Myers' M. Daws 1, 150 ft nsl and 1800 ft wel C. W. Marquess sur A-236, ⅝ mi se of prod, but separated by failures	5- 1-45	6- 1-45	523	522- 523	Cisco sd; Penn	P 2	35	Ant: geol	Not important.
Wilbarger..	.....	National Asso. Pet. Co.'s Sam Kelly 1, nw nw nw H&TC Ry 30, blk 13, 3⅛ mi se Harold multi-pay fld	4-25-45	6-29-45	4926	4910–4926	Ellenburger dolo; Ord	F 117, 13 wtr; 2"	41	Ant; geol, geop	3 oil zones probable for this new area. Productive area speculative.
Young.....	.....	Fain-McGaha's H. O. Prideaux 2, 150 ft n & 1150 ft w of nwc sec 2, A. Williams-C. T. Ry. sur A-2288, but in A. Robus sur A-240, 3¾ mi s by w of Garrett 4-well Strawn pool	.....	6-30-45	3637	3622–3637	Strawn sd; Penn	F 404; ½"	42	Ant; geol	Preceded by Bend failure ⅝ mi nw that revealed Strawn prod possibilities. Probably sml prod area; 4000 to 6000 bbls av crude yld per ac.
Throck-morton	.....	**NORTH TEXAS—New Gas Field** H. T. Merrill's R. H. Brown 1, 1540 ft nsl and 150 ft ewl sec 1613, TE&L Co. sur.	2- 4-45	6-25-45	912	- 912	.....	F 2 mln	....	Ant; geol	Not important.
Wilbarger..	Harrold.....	**NORTH TEXAS—New Oil Pay** Lincoln & Moore Drilling Co.'s Kelly 1-B, 466 ft out of nwc H&TC Ry 34, blk 13, se edge of fld	1- 5-45	6-14-45	5409	4316–4330	Bend li; Penn	P 70, 5 wtr	40	Ant; geol	Not important. Fld also prod fr 3 Canyon sands.
Duval.....	Unnamed.....	**SOUTHWEST TEXAS—New Gas Field** Santa Clara Oil Co.'s Clara Driscoll 3, 1320 fr el 330 fr sl sec 56 Santa Rosalis Gr, 3120-ac lse	5-17-45	5-20-45	3218	3157–3166	Catahoula sd; Mio	F 12 mln	....	Flt; seis	Made heavy spray of oil on drill stem test.
Crane.....	.....	**WEST TEXAS—New Oil Fields** Gulf's U. Henderson 1-E, 660 ft snl and 1980 ft wel PSL 25, blk B-27, 2⅞ mi nw of 5650-65 ft Ellenburger in S sector Sand Hills fld, nearest prod	2- 9-45	6-29-45	6625	4350–4409	Cleark Fork li; Perm	F 2, 52 wtr, 1.03 mln, ½"	....	Ant; geol, cd	Not important; no market for gas, which tests 328 grains hydrogen sulphide per 100 ft gas, while sml oil flow is exceeded by wtr. More attractive prod anticipated s and upstructure.
Yoakum...	.....	Dunigan Bros.-F. T. Brahaney's (was Skelly Oil Co.'s) W. S. Hodges 1, c nw nw sec 446, blk D, J. H. Gibson sur, 5 mi n by w of West 1-well pool	7-21-44	6-26-45	7717	5250–5292	San Andrea li; Perm	P 76	32	Ant; geol	Not important unless more attractive prod occurs on outlying leases.
Andrews...	Fullerton-San Andres	**WEST TEXAS—New Oil Pays** Chalmetter Pet. Corp.'s Lake Shore Corp. 1, c nw PSL sec 24, blk A-26, 1⅛ mi nw of most northeasterly Clear Fork prod in Fullerton fld	12-28-44	5-30-45	7637	4580–4650	San Andres li; Perm	P 40, 10% wtr	35.2	Ant; geol	1st San Andres prod for fld, making 4 oil zones. Structural position receded below Glorietta after checking high to this zone. 4th oil zone for fld; not important.
Winkler....	Keystone.....	Sun Oil Co.'s Keystone Cattle Co. 2, 660 ft nsl and 1987 ft wel PSL sec 4, blk 77, 1¾ mi n by w Ellenburger prod	12-20-43	6- 2-45	10396	8460–8594	Silurian li; Sil	P 63, 47% wtr	31.4	Ant	Not commercial and more than 1000 ft low to nearest deep test in Ellenburger prod sector of fld, where prolific Silurian oil flow has been passed up. Oil classed as sour, having 0.8% sulphur content. 1st Silurian oil comp for county.
Hockley...	Levelland.....	**WEST TEXAS—Oil Field Extension** Texas Co.'s W. T. Coble 1, 580 ft out nec Labor 20, Lge 67, Hardeman County School Lands, 2¼ mi w of disc	3- 9-45	6-12-45	4860	4760–4860	San Andres li; Perm	P 97, 30 wtr	29.4	Ant; geol	This 2nd prod and extension reveals remarkably flat structure of sizeable proportions. Crude yld per ac will be subnormal; no appreciable amt gas present.
Coleman...	.....	**WEST CENTRAL TEXAS—New Oil Field** C. A. White-Henry O. Newman's C. L. Gunn 1, 990 ft nsl and 660 ft ewl HT&B Ry sec 40, 1½ mi se Williams 2-pay fld	11-22-44	5-31-45	3515	3355–3375	Strawn sd; Penn	F 12; ¼"	42	Ant; geol	Not important.
Coleman...	.....	**WEST CENTRAL TEXAS—New Gas Field** W. W. Harvey-H. H. Henderson's J. E. McCord 1, 600 ft s and 614 ft e of nec sec 318, W. Shepherd sur, but in J. W. Meeks sur No. 159, 3⅜ mi w of prod	8-15-44	6- 2-45	3880	3430–3462	Fry sd; Penn	4.160 mln dry	....	Ant; sub	Nearby failures localize this gas strike.

[1] Character of producing formations abbreviated thus: ch, chalk; dolo, dolomite; li, limestone; sd, sandstone; sh, shale, ser, serpentine; cgl, congolmerate. Ages of formations abbreviated thus: Pleis, Pleicocene; Plio, Pliocene; Mio, Miocene; Olig, Oligocene; Eoc, Eocene; U. Cre, Upper Cretaceous; L. Cre, Lower Cretaceous; Jur, Jurassic; Tri, Triassic; Perm, Permian; Penn, Pennsylvanian; U. Miss, Upper Mississippian; L. Miss, Lower Mississippian; Devo, Devonian; Sil, Silurian; Ord, Ordovician; Cam, Cambrian.
[2] Barrels of oil per day (24 hr. rate), flowing (F), pumping (P), swabbing (Sw), or bailing (B); or million cubic feet of gas daily open flow capacity; size of choke given in inches. [3] Type structure abbreviated as follows: Ant, Anticline; D, Dome; Fld, Fold or Folded; Flt, Fault or Faulted; M, Monocline; N, Nose; SD Salt Dome; Str trp, Startigraphic trap; Syn, Syncline; Ter, Terrace. [4] Method of discovery abbreviated as follows: cd, core drilling; dr, drilling; geol, geology; geop, geophysics; grv, gravity meter; ran dr, random drilling; seis seismograph; sub, subsurface geology; sur, surface geology.

Completions Near PAW Schedule of 27,000

IT IS indicated that the oil industry this year will drill very close to the number of wells scheduled as desirable under the program of the Petroleum Administration for War. In the first half of the year the program was conformed with almost exactly, and statements out of Washington have indicated that there should be no great variance from schedule in the third quarter.

The PAW schedule calls for 27,000 total new wells to be completed in 1945, or an increase of 12.5 percent over 1944. Actual completions in the first 6 months of 1945 averaged 467 per week, or 12.4 percent more than the weekly average of the first half of 1944.

Although the prospective 27,000 new wells of 1945 will be the most completions in the United States for any year since Pearl Harbor, they still will represent subnormal drilling for the fourth consecutive year. In the five years, 1937-1941, completions ranged between 27,500 and 32,000 per year and averaged 30,500 annually. They dropped to 21,454 in 1942, to 19,245 in 1943, and recovered to 24,451 in 1944.

This year's subnormal rates of completing wells have prevailed in spite of

■ CONTINUED ON PAGE 60

Active Drilling Operations in United States at End of Month, 1941-1945

(Includes wells drilling and rigging up)

MONTH	1941	1942	1943	1944	1945
January	3,042	3,002	2,173	2,992	3,835
February	3,203	2,313	2,201	3,118	3,695
March	3,320	2,319	2,267	3,273	3,624
April	3,504	2,283	2,312	3,407	3,832
May	3,559	2,323	2,308	3,482	3,852
June	3,806	2,362	2,502	3,811	3,996
July	4,057	2,611	2,658	3,917	....
August	4,293	2,444	2,868	4,011	....
September	3,986	2,420	2,986	4,032	....
October	3,975	2,481	3,168	4,167	....
November	4,072	2,454	3,261	4,197	....
December	3,842	2,260	3,148	4,180	....

Weekly Average Rate of Completing Wells in the United States, by Months, 1941-1945

MONTH	1941	1942	1943	1944	1945
January	496	572	345	358	418
February	505	508	317	408	438
March	494	351	288	392	450
April	594	368	349	405	504
May	594	394	322	446	463
June	633	388	378	482	543
July	693	416	391	520	....
August	691	388	395	498	....
September	716	421	399	539	....
October	709	413	392	529	....
November	680	370	440	478	....
December	630	383	441	499	....
Year	621	411	370	470	....

Weekly Average Completions 12.4 Percent Above Last Year for First 6 Months

(Figures compiled from weekly reports of editorial men, with following exceptions: Illinois from Illinois Geological Survey; Indiana from Indiana Division of Geology; Missouri from Missouri Geological Survey; Allegany, New York, Bradford and Kane-Clarendon, Pennsylvania, from the Producer's Monthly; Tennessee from Tennessee Division of Geology)

	MONTHLY COMPLETIONS: June, 1945								CUMULATIVE COMPLETIONS: First Six Months								RIGS IN OPERATION					
	Details for June, 1945					Total Completions			Details, January-June, 1945					Total Completions			Details for June 30, 1945			Total: Drilling and R. U.		
	New Wells				Old Wells Deepened	June., 1945[1]	May, 1945[3]	June., 1944[2]	Total Footage June, 1945	New Wells				Old Wells Deepened	Jan.-June, 1945[4]	Jan.-June, 1944[5]	Percent Change in Weekly Average	Total Footage 6 Months 1945	Drilling	Rigs Up	Shut Down	June 30, 1945	May 31, 1945	June 30, 1944
State or District	*Oil	Gas	Dry	Others[6]						*Oil	Gas	Dry	Others[6]										
Alabama	3	....	3	....	....	6	4	4	15,975	6	1	9	....	....	16	14	+ 18.5	51,105	4	3	1	7	6	6
Arizona	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....	....	1
Arkansas	12	....	5	....	....	17	26	19	70,862	48	1	35	....	1	85	98	— 9.9	346,460	26	5	7	31	27	41
California	148	4	38	....	....	190	235	209	764,853	884	21	153	....	5	1,063	997	+ 10.7	4,311,640	284	51	29	335	320	400
Colorado	1	....	....	....	....	1	....	4	6,242	10	....	2	....	....	12	12	....	66,529	27	2	4	29	25	15
Florida	....	....	1	....	....	1	4	1	5,796	....	....	9	....	....	9	1	+835.1	58,951	3	1	....	4	5	3
Georgia	....	....	1	....	....	1	....	....	345	....	....	4	....	....	4	1	+316.2	13,273	1	....	1	1	....	3
Illinois	89	....	55	....	6	150	149	183	345,876	455	....	286	6	78	825	833	+ 2.8	1,809,727	175	50	19	225	213	216
Indiana	8	2	12	....	....	22	27	15	30,459	47	7	90	....	1	145	134	+ 12.4	224,751	30	21	10	51	44	39
Iowa	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	1	— 50.0	1,250	....	....	....	....	....	1
Kansas	62	6	68	....	5	141	165	179	448,239	349	57	327	3	38	774	865	— 7.1	2,459,870	259	18	7	277	257	261
Kentucky	25	4	19	....	....	48	37	85	85,343	96	34	97	1	1	229	347	— 31.5	439,438	35	22	10	57	52	87
Louisiana	52	7	30	....	....	89	93	74	686,264	290	29	162	....	2	483	359	+ 39.7	3,810,308	165	8	7	173	175	136
North	16	6	12	....	....	34	29	29	166,149	69	24	66	....	....	159	120	+ 37.6	784,327	51	3	4	54	67	40
South	36	1	18	....	....	55	64	45	520,115	221	5	96	....	2	324	239	+ 40.8	3,025,981	114	5	3	119	108	96
Michigan	26	4	38	....	....	68	70	79	157,900	158	18	198	....	....	374	308	+ 26.1	970,797	115	19	22	134	110	106
Mississippi	14	....	16	....	....	30	38	28	214,984	99	3	86	....	....	188	70	+178.9	1,244,297	62	6	2	68	68	31
Missouri	....	1	3	....	1	5	1	4	7,179	2	1	17	....	1	21	13	+ 68.0	34,561	3	1	3	4	8	7
Montana	16	2	3	....	....	21	12	36	55,963	67	9	18	....	....	94	153	— 36.2	247,918	52	7	3	59	55	96
Nebraska	....	....	....	....	....	....	....	....	....	....	....	2	....	....	2	7	— 70.3	7,018	2	....	....	2	3	2
New Mexico	20	3	8	....	....	31	28	42	115,046	152	9	55	....	1	217	210	+ 7.3	763,405	98	7	12	105	86	83
New York	70	....	....	40	....	110	96	113	147,830	329	....	2	186	....	517	621	— 13.5	692,131	100	13	27	113	102	105
North Dakota	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	3
Ohio	26	40	32	....	....	98	93	80	222,405	103	161	172	....	....	436	418	+ 8.3	1,112,201	158	22	38	180	190	184
Oklahoma	129	3	75	4	....	211	224	220	841,672	705	48	373	19	20	1,165	854	+ 41.7	4,952,339	442	24	20	466	497	433
Pennsylvania	134	16	6	113	2	271	248	276	464,054	710	91	23	613	10	1,447	1,411	+ 6.5	2,454,716	274	41	61	315	297	322
South Dakota	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	3	1	2
Tennessee	....	....	....	....	....	....	1	1	....	....	....	....	2	....	....	7	— 70.3	5,890	....	....	....	....	1	5
Texas	317	42	216	2	10	587	685	662	2,475,099	2,008	330	1,177	20	49	3,584	2,946	+ 26.3	15,962,431	1,163	43	95	1,206	1,170	1,071
E.Tex.Border	1	....	1	....	....	2	5	5	7,993	3	23	8	....	....	34	11	+221.4	218,960	31	3	3	34	31	10
E. Tex. Field	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....	....	....
RestofE. Tex.	13	1	8	....	....	22	23	28	119,043	56	4	47	....	2	109	147	— 23.0	699,155	46	1	6	47	41	53
North Texas	75	1	77	2	2	157	168	157	346,089	425	6	369	18	9	827	685	+ 25.4	2,026,084	141	5	13	146	162	154
West Central	13	4	24	....	....	41	38	40	114,372	85	30	113	....	2	230	199	+ 20.0	630,639	77	8	31	85	85	66
West Texas	104	1	30	....	7	142	186	154	676,261	687	8	216	....	23	934	785	+ 23.6	4,417,354	424	16	23	440	387	423
Panhandle	13	22	6	....	1	42	38	27	127,061	94	167	22	....	5	288	114	+162.4	904,502	144	3	5	147	140	67
Upper Coast	28	2	24	....	....	54	69	66	376,961	201	24	124	....	5	354	274	+ 34.2	2,576,923	94	2	1	96	100	85
Lower Coast	54	6	20	....	....	80	103	115	509,152	315	50	144	1	2	512	454	+ 17.1	3,247,965	141	3	7	144	152	149
Southwest	14	5	19	....	....	38	43	56	157,208	124	18	106	....	1	249	224	+ 15.4	1,005,856	45	2	2	47	49	52
S. Central	2	....	7	....	....	9	12	14	40,959	18	....	28	1	....	47	50	— 2.4	234,993	20	....	4	20	23	12
Utah	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	2	....	5
Washington	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
West Virginia	11	50	6	....	4	71	74	83	189,776	32	281	48	....	24	385	456	— 12.3	983,560	69	11	17	80	73	82
Wyoming	4	....	....	....	....	4	3	17	19,404	50	1	13	....	....	64	79	— 15.9	300,524	63	6	3	69	65	63
Total U. S.	1,167	184	635	159	28	2,173	2,313	2,414	7,371,566	6,600	1,102	3,361	848	231	12,142	11,219	+ 12.4	43,325,090	3,615	381	398	3,996	3,852	3,811

* Includes distillate wells. [1] Wells completed in 4 weeks, or 28 days, ended June 30, 1945. [2] Wells completed in 5 weeks, or 35 days, ended July 1, 1944. [3] Wells completed in 5 weeks, or 35 days, ended June 2, 1945. [4] Wells completed in 26 weeks, or 182 days, ended June 30, 1945. [5] Wells completed in 27 weeks, or 189 days, ended July 1, 1944. [6] Water input, gas injection, and salt water disposal wells.

Depth Marks Tumble in Wartime Search for Oil

During the past year new records have been set for both drilling depth reached and depth from which oil produced

IN REFLECTION of the urgent need for oil and the pronounced trend toward deeper drilling this year and last year, new records for drilling and producing depths have been established in numerous states and districts since this time last year, when THE OIL WEEKLY presented its last previous lists of wells holding these records (July 24, 1944, issue, page 56).

Since a year ago new records have been set for the United States (and the world) for both drilling depth reached and depth from which commercial production has been obtained. Meanwhile, new records in drilling depth have been established in about a third of all districts, and producing depths also have been pushed deeper in approximately one third of the districts.

Present Record

Today's record for the greatest depth ever drilled into the earth's crust is 16,655 feet—3 miles plus 815 feet. A year ago the record was 561 feet short of 3 miles. The new record holder is on the upper Gulf Coast of Texas, while that of a year ago was in West Texas.

The present record for the deepest point from which oil is being produced anywhere in the world is 13,520 feet—2½ miles plus 320 feet. A year ago the record was within 17 feet of the present record. The new record holder is in South Louisiana, and so was that of a year ago, although in a different field.

The record-drilling depth of 16,655 feet was reached recently in Phillips Petroleum Company's Schoeps 3, Millican dome, Brazos County, upper Texas Gulf Coast. While it set a new record, the well also gave evidence of difficulty in reaching such depth. Stuck drill pipe caused loss of the hole below 12,000 feet, and it is reported that the company will attempt completion as a gas well near 11,000 feet.

This was the second new record to be set in deep drilling since this time last year. In the latter part of 1944 the record had been secured by a 16,246-foot well of Standard Oil Company of California in the Coles Levee field, Kern County, California, the only other well ever drilled below 16,000 feet. Besides those two 16,000-foot wells, there have been three which went below 15,000 feet, including the 15,279-foot record holder of a year ago located in West Texas, also drilled by Phillips Petroleum Company, a 15,301-foot test in McMullen County, Southwest Texas, drilled this year by Quintana Petroleum Company, and a 15,004-foot test of Continental Oil Company in the Wasco field, Kern County, California.

Drilling has reached within about 2000 feet of the present world record in Oklahoma and has been carried below 14,000 feet in South Louisiana. Wells have been drilled to depths of 12,000 to 14,000 feet on the lower Texas coast, and in Florida, New Mexico, North Louisiana, Mississippi, Alabama, and eastern Texas. Districts which have had drilling below 10,000 feet include, in addition to those mentioned above, Arkansas, South Central Texas, Wyoming, Colorado, Michigan, North Dakota, Pennsylvania, and West Virginia. Nearly all states which have had drilling have been tested below 5000 feet, a depth which was considered deep 20 or 25 years ago.

Record Producing Depth

Although surpassed by several other districts in drilling depth reached, the Louisiana Gulf Coast stands first, as it did a year ago, in actually producing oil from great depth. The world's deepest producing well is Shell Oil Company's Smith-State 1, Weeks Island field, Iberia Parish, Louisiana, yielding 40 gravity oil from Miocene sand at 13,505-13,520 feet. (This well, having been drilled to 14,023 feet prior to completion, also is the deepest well so far drilled in South Louisiana.) At this time last year the record producing depth was that of 13,503 feet in Union Producing Company's and Fohs Oil Company's Buckley-Bourg 2, De-Large field, Terrebonne Parish, Louisiana, yielding 37 gravity oil. The only other production below 13,000 feet is in the Wasco field, Kern County, California, where Continental Oil Company's KCL A-2 remains the deepest producer as it was a year ago, with oil coming from 13,175 feet.

Deepest production outside South Louisiana and California comes from

United States Drilling Depth Records, by States and Districts

State or District	Feet	Year	Formation	WELL, LOCATION AND REMARKS
Upr. Tex. Gulf	16,655	1945	L. Cretaceous	Phillips Pet. Co.'s Schoeps 3, Millican salt Dome are, Brazos Co.
California	16,246	1944	Miocene	Standard of Calif.'s KCL 20-13, S. Coles Levee, Kern Co.
S. W. Texas	15,301	1945	L. Cretaceous	Quintana Pet. Co.'s So. Tex, Synd. 3-D, McMullen Co.
West Texas	15,279	1944	Ellenburger	Phillips Pet. Co.'s Ada Price 1, T. C. Ry sur, Pecos Co.
Oklahoma	14,582	1938	Pennsylvanian	Continental Oil Co.'s Proctor 1, Washita Co.
S. Louisiana	14,023	1945	Miocene	Shell Oil Co.'s Smith-State 1, Weeks Island, Iberia Parish.
Lwr. Tex. Gulf	13,728	1939	Yegua	Union Prod. Co.'s Brown 1, Augua Dulce field, Nueces Co.
Florida	13,512	1944	Lime	Humble O. & R. Co.'s Gulf Coast Realty 2, Sunniland field, Collier Co.
New Mexico	12,977	1945	.....	Phillips Pet. Co.'s State-Lea-Mex. 4, Maljamar area, Lea Co. Installing larger derrick to deepen below 14,000 ft, or water in Ellenburger.
N. Louisiana	12,952	1942	Smackover	Union Prod. Co.'s McDonald Unit 1, N. Lisbon field, Claiborne Parish.
Mississippi	12,843	1943	Glen Rose	California Co.'s Smith et al 1, Brookhaven area, Lincoln Co.
Alabama	12,399	1941	Jurassic	Union Prod. Co.'s Waite 1, 27-8n-1e, Clarke Co.
East Texas	12,157	1945	Travis Peak	Phillips Pet. Co.'s Englander 1, D. T. Quevado sur, s&w S. Taylor field, Smith Co. Still drilling July, 1945, and heading for the Smackover.
E. Tex. Border	11,303	1939	Salt	Texas Co.'s Adams 1-A, Cox sur, Panola Co.
Arkansas	11,137	1944	Eagle Mills	Union Prod. Co.'s Crossett Lbr. Co. E-1, 12-19-7, Ashley Co.
S. Cent. Tex.	11,042	1942	Edwards lime	Quintana Pet. Corp.'s Washburn 3-A, Washburn field, LaSalle Co.
Wyoming	10,910	1944	.....	Superior Oil Co.'s Ong 1, Lance Creek field, Niobrara Co.
Colorado	10,815	1939	Mancos shale	Amerada Oil Co.-California Co.'s Miller 1, Divide Creek, Mesa Co.
Michigan	10,447	1941	St. Peters	Gulf Ref. Co.'s Bateson 1, 2-14n-4e, Bay Co.
N. Dakota	10,281	1938	.....	California Co.'s Kamp 1, Nesson Anticline, Williams Co.
Pennsylvania	10,096	1944	Trenton	Manufacturers Light & Heat Co.'s Hockenberry 1, Mercer Twp., Butler Co.
W. Virginia	10,018	1941	Queenston	Hope Nat. Gas Co.'s Gribble 1, Grant dist., Harrison Co.
North Texas	9,919	1945	Ellenburger	Pure Oil Co.'s Little 1-A, J. Myers sur, 1½ mi sw Gordonville.
Montana	9,678	1941	Schist	Carter Oil Co.'s Northern Pacific 1, Boker-Glendive, Fallon Co.
New York	8,626	1944	Oswego	New Penn Dev. Co.'s Harrington 1, Woodhull Twp., Steuben Co.
Maryland	8,165	1941	Helderburg	Wm. Snee's Schartzer 1, Accident dist., Garrett Co.
Tex. Panhandle	8,161½	1943	Granite	Stanolind O. & G. Co.'s Jarrell 1, Capitol Synd. Lds., Parmer Co.
Kansas	7,921	1945	Arbuckle	Stanolind O. & G. Co.'s Adams 1, Meade Co.
South Dakota	7,918	1939	.....	S. Dakota State Royalty Co.'s State 1, Camp Crook, Harding Co.
Ohio	7,889	1933	Clinton	Sylvania Prod. Co.'s Knowlton 1, Independence Twp., Washington Co.
Georgia	7,320	1944	Granite	Mont Warren-Ray Robinson's Chandler 1, Land Dist, 26. Early Co.
Illinois	7,207	1940	St. Peter	Pure Oil Co.'s Billington 3, 26-1n-7e, Cisne field, Wayne Co.
W. Cent. Tex.	7,124	1943	Ellenburger	Devonian Oil Co.'s Ray Buck 1, I&GN sur, Parker Co.
Nebraska	6,846	1938	Pennsylvanian	Union Oil Co. of Calif.'s Agate 15, Sioux Co.
W. Kentucky	5,955	1920	Ordovician	D. D. Flanagan's Sol Blue 2, Union Co.
Eastern Ky.	5,743	....	Red Medina	Columbian Fuel Corp.'s Ford Motor Co. 1, Pike Co.
Iowa	5,305	1930	Cambrian	Oil Dev. Co.'s Wilson 1, Page Co.
Indiana	5,035	1938	Devonian	Carter Oil Co.'s Graulich 1, 4-7s-14w, Posey Co.
Missouri	4,740	1941	Cambrian	Strake Pet. Co.'s T. P. Russel 1, Pemiscot Co.
Tennessee	4,235	1932	Knox dolomite	Sequatchie Gas Co.'s Sewanee Fuel & Iron Co. 1, Grundy Co.

United States Producing Depth Records, by States and Districts

State or District	Feet	Year	Formation	WELL, LOCATION AND REMARKS
S. Louisiana...	13,520	1945	Miocene	Shell Oil Co.'s Smith-State 1, Weeks Island field, Iberia Parish, 40-gravity oil production.
California.....	13,175	1938	Miocene	Continental's KCL A-2, Wasco field, Kern Co.
Upr. Tex. Gulf	11,805	1943	Wilcox	Superior Oil Co.'s South Tex. Lev. Co. 1, Lake Creek field, Montgomery Co.
Florida.....	11,626	1943	Glen Rose	Humble's Gulf Coast Realty 1, Sunniland field, Collier Co.
W. Texas.....	11,117	1945	Ellenburger	Shell Oil Co.-Texas Co.'s Ratliff-Bedford 1, blk 73, Andrews Co., coring deeper after confirming oil production from Ellenburger topped 11,018 ft.
Oklahoma....	10,882	1945	Pennsylvanian	Magnolia Pet. Co.'s Cunningham 1, Chitwood pool, Grady Co.
N. Louisiana..	10,681	1945	Cotton Valley	Cotton Valley Operators' Gray 1, Cotton Valley field, Webster Parish.
Mississippi....	10,560	1944	Massive sd	California Co.'s Douglas 1, Mallalieu field, Lincoln Co.
E. Texas.....	10,312	1942	Pettit	Humble's Curtis 1, Larissa field, Cherokee Co.
Lwr. Tex. Gulf	9,927	1941	Frio-Vicksburg	Richardson Pet. Corp.'s Cain & Secrist 23, Saxet field, Nueces Co.
Arkansas.....	9,330	1942	Smackover	Tide Water Assoc. Oil Co.-Seaboard Oil Co. of Dela.'s Bandow 1, Patton field, Lafayette Co.
Wyoming.....	8,725	1931	Frontier	Resolute Oil Co.'s N. P. 1, Badger Basin field, Park Co.
New Mexico..	8,650	1945	Paradox (Penn.)	Southern Union Gas Co.'s Barker-Ute Indian 9, 21-32n-14w, Barker Dome field, San Juan Co. Gas from 8417-90 and 8630-50; td 9468.
Colorado.....	8,558	1943	Dakota-Lakota	Superior Oil Co.'s Unit 1, Douglas Creek, Rio Blanco Co.
Pennsylvania..	8,450	1944	Oriskany	New Penn. Dev. Corp.'s Heyn 1, S. Union Twp., Fayette Co.
W. Virginia...	8,048	1944	Oriskany	Ohio Oil Co.'s Kaemerling 1, Dry Fork Dist., Tucker Co. Gas well.
Michigan.....	7,850	1941	Salina	Gulf Ref. Co.'s Bateson 1, 2-14n-4e, Bay Co.
S. Cent. Tex..	7,669	1945	Edwards	Humble O. & R. Co.'s J. Courand 1, Imogene field, Atascosa Co.
North Texas..	7,324	1942	Marble Falls	Sinclair Prairie Refining Co.'s Jones 1, Forestburg field, Montague Co.
S. W. Texas...	6,922	1944	Wilcox	Edwin M. Jones' Ezzell C-2, San Caja field, McMullen Co.
E. Tex. Border	6,794	1945	L. Rodessa	L. E. & R. J. Whelan's Peal Est. 1, Harleton area, Harrison Co.
Montana.....	6,488	1944	Colorado (2nd Frontier)	General Pet. Corp.-Peters' U. S. Govt. 1, Clark's Fork field, Carbon Co
Kansas.....	6,485	1936	Viola lime	Olson Drlg. Co.'s Morrison 3, Morrison pool, Clark Co.
Ohio.....	5,820	1941	Clinton	East Ohio Gas Co.'s Phillips 2, Washington Twp., Harrison Co., deepest gas prod.
New York....	5,200	1938	Oriskany	N. Y. State Nat. Gas Co.'s Carr 1, West Union Twp., Steuben Co.
Illinois.....	4,780	1943	Trenton	Kingwood Oil Co.'s Shanafelt 24-A, Salem pool, Marion Co.
W. Cent. Tex.	4,555	1942	Ellenburger	Fleming Oil Co.'s Corbett 4, Corbett field, Stephens Co.
Ohio.....	4,539	1945	.....	B. G. Bartley's U. S. A. 1, Salt Creek Twp., Muskingum Co. deepest oil prod.
Eastern Ky...	4,523	....	Devonian sh	Columbian Fuel Corp.'s Semet-Solvay Coal Co. 1, Pike Co.
Tex. Panhandle	3,830	1929	Permian	Canadian River Gas Co.'s Bivens 9-A, Hartley Co., gas prod.
Alabama.....	3,624	1945	Eutaw	Hunt Oil Co.'s Robert Land 4, Gilbertown field, Choctaw Co.
Indiana.....	2,928	1941	McClosky	J. S. Roberts' Keck 1, 34-3s-14w.
Nebraska.....	2,900	1942	Hunton	Skelly Oil Co.'s Wiltse 1, Dawson pool, Richardson Co.
Western Ky...	2,840	1944	McClosky	Ashland O. & R. Co.'s Johnson 2, 13-O-12, Raleigh pool, Union Co.
Tennessee.....	1,617	1920	Knox dolomite	Harbor Oil Co.'s Sells 1, Pickett Co.
Missouri.....	1,444	1940	Bartlesville	Cities Service Oil Co.'s Jim Cook 1, 32-65n-39w, Tarkio pool, Atchison Co.

depths of 11,000 to 12,000 feet in the Lake Creek field of the upper Texas coast, the Sunniland field of Florida, and a new producing area in Andrews County, West Texas. In the 10,000 to 11,000-foot range there is production in Oklahoma, Mississippi, and eastern Texas. While the lower Texas coast has good possibilities for deeper production, its deepest at present is a little short of 10,000 feet, being in the Saxet field near Corpus Christi. Arkansas has production at 9330 feet in the Patton field, while there is production of oil or gas between 8000 and 9000 feet in Wyoming, New Mexico, Colorado, Pennsylvania, and West Virginia. Deepest production ranges between 6000 and 8000 feet in Michigan, South Central Texas, North Texas, Southwest Texas, Montana, and Kansas. The deepest producing wells are from 4000 to 6000 feet deep in Ohio, New York, Illinois, Ohio, Kentucky, and West Central Texas, and from 3000 to 4000 feet in the Texas Panhandle and Alabama, while those in Indiana and Nebraska are 2800 to 3000 feet. Tennessee's deepest pay is at 1617 feet and that of Missouri at 1444 feet.

Completions

■ CONTINUED FROM PAGE 58

the fact that the number of drilling rigs in operation has been consistently greater than in 1941, the most active of the pre-war years for the United States. Active operations at the end of June, 1945, included 3996 wells drilling or rigging up, against 3811 a year previously and 3806 at the end of June 1941. Yet for the month of June completions averaged 543 per week this year against 482 last year and 633 weekly in 1941. Similar comparisons for other months since 1941 are embodied in accompanying tables.

Several factors are considered responsible for the fact that completions have not been as numerous as might normally have been expected in view of the large number of rigs in operation. These include the worn condition of rigs generally, delays in moving between drilling sites, less efficient labor, and increased concentration of drilling in deeper fields.

Although completions for the United States as a whole averaged 12.4 percent more per week than last year for the first 6 months, the changes from 1944 by states and districts have varied widely, with some areas showing decreases while others have had sharp increases.

Texas has had 26 percent more completions than last year, with most of the major districts of the state showing gains fairly close to that figure. Louisiana's completions are up 40 percent, and both the northern and southern districts register similar increases. Mississippi has had more than double last year's completions. New Mexico has had a 7 percent increase and Arkansas a 10 percent decrease.

California completed 11 percent more wells per week than last year for the first 6 months, Colorado the same, Montana 36 percent less, and Wyoming 16 percent less.

Oklahoma has been remarkably active, having accounted for 42 more completions per week than last year, in the development of important new reserves, but Kansas had a 7 percent decline. Illinois registered a 3 percent increase, Indiana a 12 percent gain, Kentucky a 31 percent decrease, Ohio an 8 percent rise, and Michigan a 26 percent increase.

Pennsylvania shows a small increase over last year in the rate of completing wells, but New York and West Virginia have had decreases.

62 Fields Removed from PAW Restricted Area List

Easing of restrictions on materials contained in Amendment 2 to PAO-11 of PAW has brought about the removal of 62 fields from the "Restricted Area" classification in PAW District 3.

The elimination of the 62 fields enables operators in these areas to resume drilling for oil on 40-acre spacing and for gas on 640-acre spacing without securing a special permit from PAW.

Restricted Area List

The fields remaining on the "Restricted Area" list:

East Central Texas: Barron, Bethany, Carthage, Chapel Hill, Grimes, Opelika and Tri-Cities.

Texas Upper Gulf Coast: Bammel, Blessing, Brushy Creek, Chesterville, Chocolate Bayou, Columbus, Francitas, Gillock, Hope, Jackson Pasture (Double Gum Bayou), Joyce Richardson, Katy, Lake Creek, Lissie, Nada, Needville, New Ulm, North Houston, Old Ocean, Pinehurst, Rock Island, Pledger, Provident City, Ramsey, Shepherd, Sheridan, South Anahuac (Double Bayou), Sugar Valley, Texana, and Vienna.

South Texas: Agua Dulce, Albrecht, Banquette, Burnell (Carrizo-Wilcox), Charce, Coquat (Carrizo-Wilcox), Cosden (Carrizo-Wilcox), Cottonwood Creek, Goebel (Carrizo-Wilcox), Gregory, LaBlanca, Los Indios, McAllen, Mineral (Carrizo-Wilcox), Mission Valley, Nordheim, North Pettus (Carrizo-Wilcox), Quinto Creek, Ray (Carrizo-Wilcox), Retania, Riverside, Saint Charles, San Caja, San Salvador, South Weesatche, Stratton, West Tuleta, Violet, Weslaco, Wilson, and Yorktown.

West Texas: Page.

Louisiana Fields

South Louisiana: Big Lake, Branch, China, College Point, DeLarge, East Moss Lake, Egan, Gordon, Gum Cove, Hester (Convent), Krotz Springs, Lakeside, Laurel Ridge, Mystic, North Elton, North Tepetate, Pecan Island, Pecan Lake, Reddell, St. James, St. Martinville, South Elton, South Jennings, South Lake Charles, Starks, Thornwell and West Mermentau.

North Louisiana: Athens, Bear Creek, Beckman, Benton, Calvin, Lisbon, Lucky Area, Old Spider, Sibley, Sicily Island, and Tremont.

Arkansas: Big Creek, Columbia, Dorcheat, Macedonia, McKamie, Salem Church, and Texarkana.

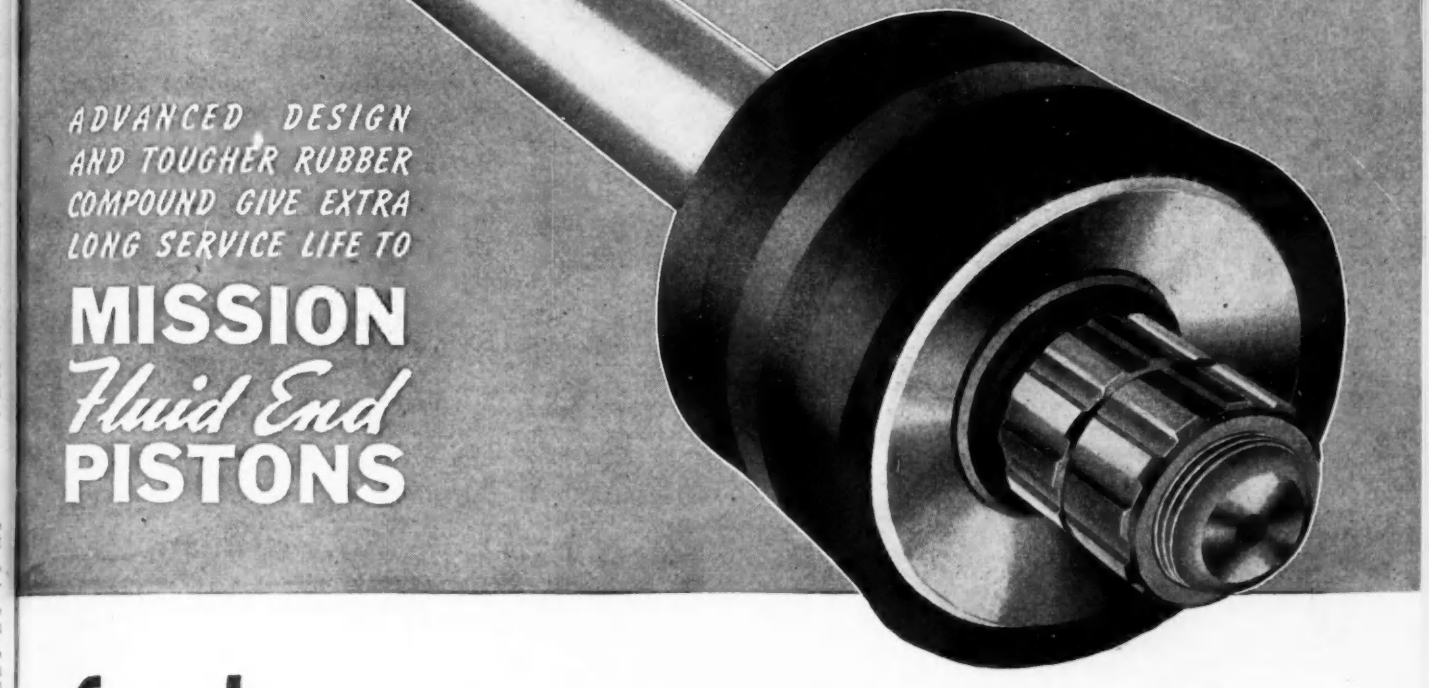
Garvin County, Oklahoma Lease Boom Reaches Peak

Major oil companies and independent operators have spent more than $2,500,000 on leases and royalties in Garvin County, Oklahoma, since the first of the year and more than 60 percent of the county is under long-term leases.

Discovery of Bromide sand production near Antioch and prospects that Cities Service Oil Company will open a major pool north of Lindsay have intensified the play on the west side of Garvin County. Prices for leases which were considered high at $5 an acre a year ago have skyrocketed to more than $100 an acre.

Landmen believe the peak has been reached, since most of the "trend" acreage is now under lease.

Change the Rubbers and Save the Piston...



ADVANCED DESIGN AND TOUGHER RUBBER COMPOUND GIVE EXTRA LONG SERVICE LIFE TO

MISSION *Fluid End* **PISTONS**

for longer trouble-free service...

Mission piston rubbers are usually giving good service long after ordinary pistons have worn out. The combination of tough rubber compound and advanced design, plus the large wiping surface and positive seal means longer life for rubbers. And plus this, you get longer liner life, more fluid per stroke, and more hole per hour.

When after a long, uninterrupted run, the rubbers are finally worn out, you can renew the piston by simply installing new rubbers on the old body—without even removing the piston from the rod, and at a fraction of the cost of a new piston. Proved long life and low replacement cost enables us to **guarantee** Mission Pistons to be the most economical on the market to operate.

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They work together for best all round performance

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5A–7

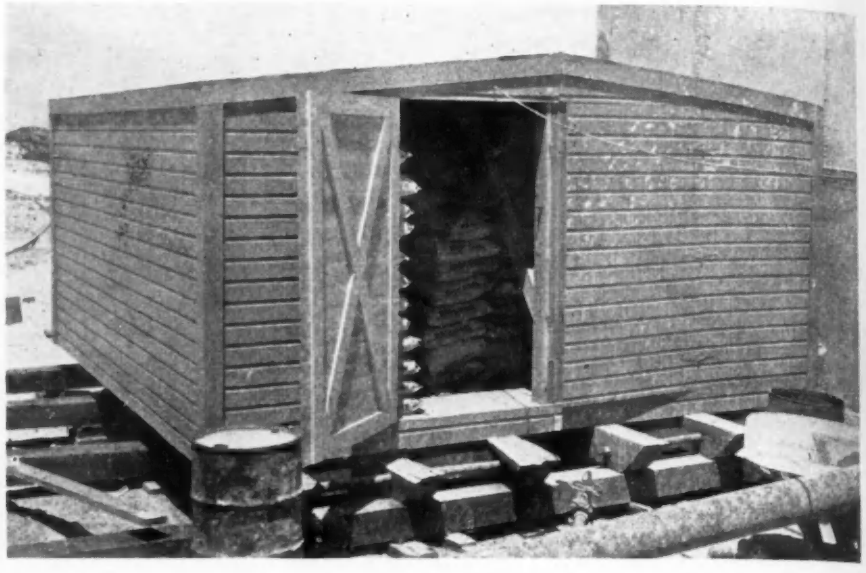
Two-Unit Mud House Simplifies Transfer and Fitting Out at Rig

Considerable time is required, and much material wasted, when the mud storage house must be rebuilt anew at each location, and again dismantled when a move is made. One drilling superintendent avoided all this duplication of work by fabricating a wooden house, on skids, in which mud materials could be stored with complete protection against the weather.

MATERIALS HOUSING

The house, having a roof with a relatively low pitch, is divided along the ridge pole line into two sections, each of which fits easily on the bed of a transfer unit. Each section is thus built with walls on three sides, but with the high side open from sill to roof. The unit is self-supporting on its skids, and braced to withstand rough hauling.

When delivered at a rig site, timbers are laid to form a level sub-base on which the two half sections are aligned so that the two portions of the floor meet smoothly. Bolts are then put through matched holes in the roof truss and the doubled 2 x 6's forming the contact points of the ends. When these are drawn tight, there is scarcely more than a thin line to show the junction of the two halves.



One section carries the door, set to swing outwardly and to close against the bolted members which form the union between the halves when in position for storing mud materials.

Wiring is built in along the rafters of one side of the unit, requiring only the plugging in of a connection to tie the lights to the rig power system.

A part from a pair of angle braces supporting the center of the roof junction, the entire floor space of the storage unit is available for use, with assurance of complete protection against even the most severe weather.

PENBERTHY
"REFLEX"
WATER GAGE SET

For oil field, locomotive type and marine boilers. Water shows black — steam shows white; the water level is unmistakable. U-Bolt construction is strongest and simplest to service. Glass replaced by simply removing nuts on face of gage . . . unnecessary to work between gage and boiler. Conforms with A.S.M.E., Federal and State requirements when used for pressures specified by their respective codes.

This is one of the complete line of Penberthy gages that meet every liquid level gage requirement.

See Pages 2450 to 2455, Composite Catalog.

PENBERTHY INJECTOR CO.
DETROIT, MICH. Canadian Plant WINDSOR, ONTARIO

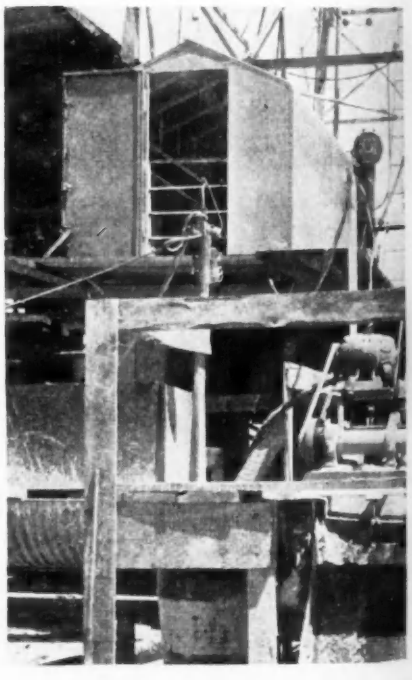
Welded Guard Prevents Careless Use of Emergency Exit

When the dog-house was brought up from ground level to a position on the derrick floor atop a 17-foot substructure, a walkway was built around from floor to outside door, to enable the door to be closed and to provide emergency exit in case the door onto the floor was not usable.

DRILLING SAFETY

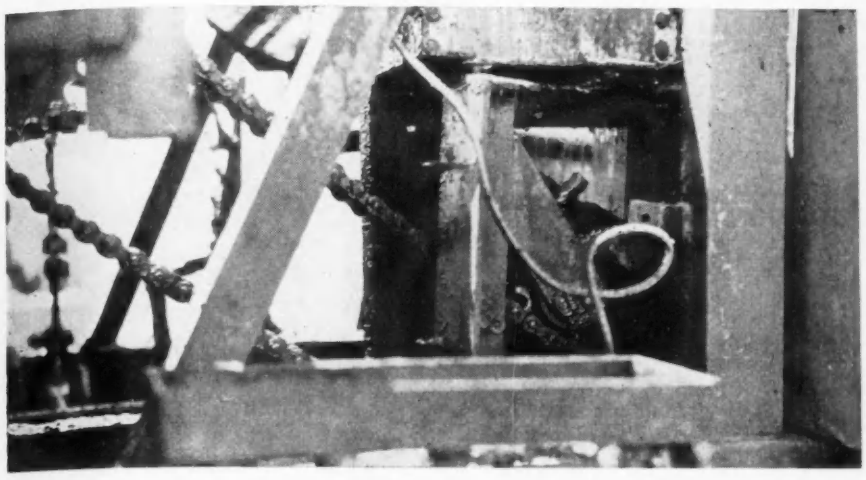
Even with the walkway, there was the possibility that a crewman might inadvertently walk through the door and across the narrow platform without realizing there was a sudden drop at the edge of the planking. To guard against this eventuality, the dog-house outer door was equipped with a grille or gate, affixed to the steel door frame, so that it would not be accidentally laid aside. The four bars in this guard closed the lower half of the door opening without appreciably affecting the light or air admitted; at the same time, leaving space above the bars which would permit emergency exit if necessary. It was felt that the warning given by the act of climbing over the bars would be sufficient to prevent accidental fall from the elevated platform—yet clearance was left for a jump if necessary, with both time and space to select a landing among the items of equipment scattered below.

The guard is set within the door frame so that the heavy steel door may be closed weathertight if required, and may be bolted shut when the house is to be moved.



DRILLING HINTS

Hinged Counterweight Insures Smooth Chain Drive



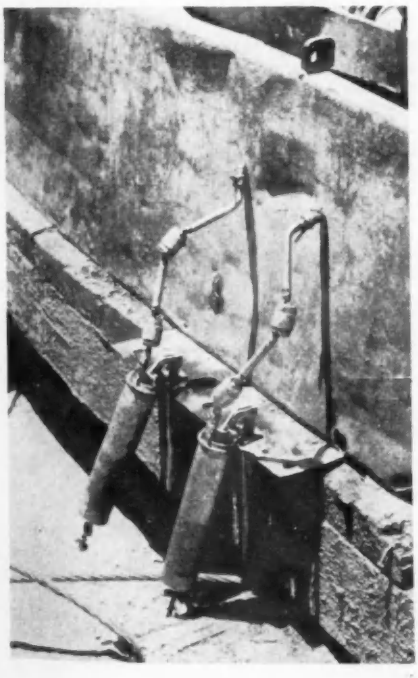
CHAIN DRIVE ADJUSTMENT

On a small truck-mounted spudding unit in which the drum is driven from a take-off on the truck drive shaft, difficulties were experienced in preventing the drive chain from slapping and occasionally jumping a tooth or two, the latter usually occurring at critical times such as when running in or out of the hole rapidly. The chain was long in proportion to the size of the unit, but it was impossible to get the unit closer to the power source.

Solution was found in mounting a small weighted idler sprocket above the center of the upper chain, the unit being sufficiently heavy to provide constant pressure on the top of the chain. A pair of 3-inch angle iron uprights was mounted on either side of the chain and bolted rigidly in place. Each leg of a V-shaped bracket was pivoted to the upright supports, the sprocket being swung on an axle mounted between the other two ends of the brackets. A pressure lubrication fitting is mounted on the outer end of the sprocket bearing, assuring ample lubrication for the fast-moving idler. Unusually heavy brackets supporting the sprocket provide the desired weight for holding the unit down on the chain.

The idler is inexpensive to install, the sprocket being taken from salvage. Trouble-free operation and small upkeep of the unit have saved many machine and man-hours.

Grease Gun Rack Protects Lubrication Auxiliaries



GREASE GUN STORAGE

Care taken in the handling of the ever-necessary grease gun around the drilling rig is just another small point that can add or subtract from the overall efficiency of the work. One operator, observing that high pressure grease guns usually were laid on whatever resting place happened to be within reach when workmen finished their greasing job with the resultant trouble of grit and dust becoming lodged in the nipple ends, pump piston rods and filler caps, established a practice of providing small racks on which the guns may be hung quickly and easily.

Made up of salvaged pieces of sheet steel having several holes cut in them as shown in the photograph, the racks are distributed about the rig power equipment, mud pumps and auxiliary units. They are bolted or welded to convenient parts of the equipment and at levels where the guns normally will not become dirty or be knocked over. This care has resulted in an unknown, but nevertheless definite saving in overhaul time due to cleaner joints and bearings.

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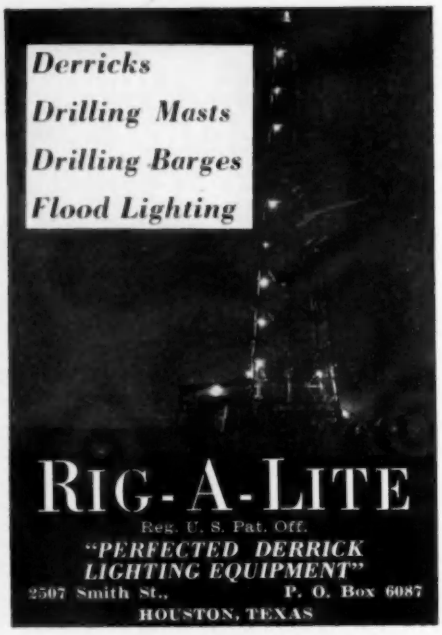

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Fluid-Loaded Counterweight Permits Accurate Balance

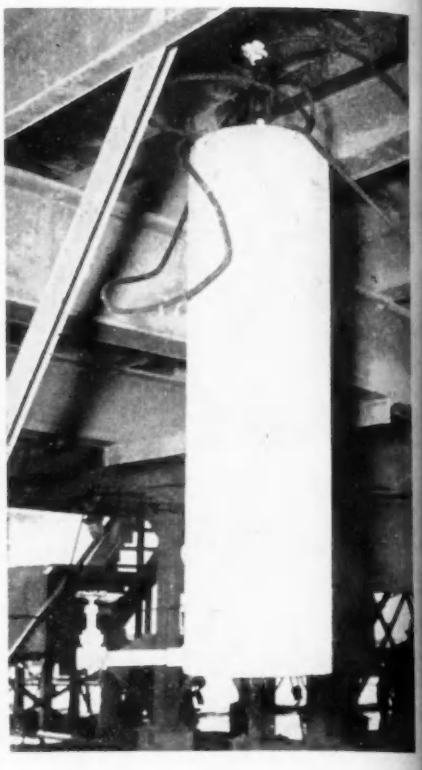
Variations in the weight of the tongs used and even in the stiffness of the mounting are taken into consideration when employing a liquid-filled counterweight, as the amount of fluid can be quickly changed to equal exactly the amount of effort required to bring the tongs into play.

PIPE TONG OPERATION

One drilling superintendent attains this adjustment of weights by the use of a welded cylinder of 10-inch pipe, with the top covered except for an aperture into which may be thrust the nozzle of the derrick hose. This covered top also carries the eye to which the tong counterbalance line is attached.

To provide regulation of the weight, the unit is filled with the hose, and then surplus water drawn off through a valve located on a nipple set at the side of the base. This method of controlling the load is much simpler than attempting to put exactly the weight into the unit with the hose; the valve also simplifies draining the cylinder before detaching.

The counterweight is slung so that, in its travel, the control valve does not come into contact with the derrick structure. Tapping the nipple into the side of the cylinder also prevents strain on the threads when the unit is set on end.



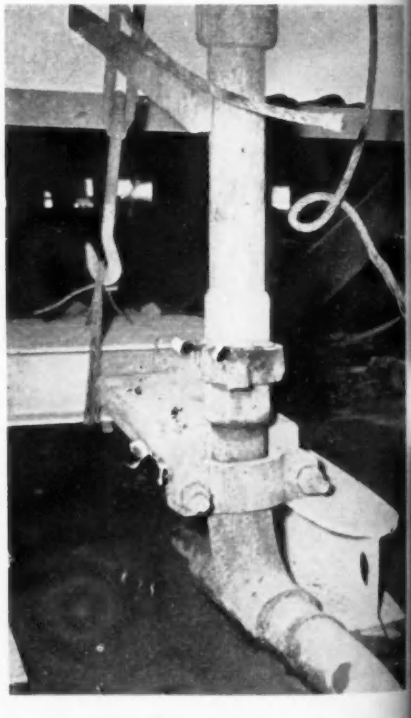
Anchorage Prevents Mud-Line Stresses at Fittings

To take the thrust where the mud line changes from horizontal run to vertical riser on which is mounted the derrick standpipe, one company has worked out a tie-down which is effective, and which does not require exact setting of the line or of its anchor.

MUD LINE SUPPORT

The line from the pumps enters the substructure aligned with one of the four corner piers, and is equipped with a sweep ell for the direction change. This ell is backed up with a section of 3 x 8-inch timber with a half-round notch in the end to fit the outside of the pipe. The other end of the block is supported between flanges of the pier unit I-beam, and may be blocked out with spacers to give the desired location of the ell. Two bolts, passing through holes in the beam, carry a clamp unit which completes the circle around the ell and which is tightened by taking up on the nuts at the ends of the bolts. The bolt heads, behind the web of the I-beam, are prevented from turning by dogs welded to them to engage a flange.

A bight of wire line, passed around the same I-beam, serves as base fastener for a turnbuckle and loop which tie to the line at floor level, anchoring the assembly against vertical displacement, and completing the immobilizing of the ell. Downthrust set up by the turnbuckle is taken by the run of the pipe, against the timber mat on which the derrick is set.



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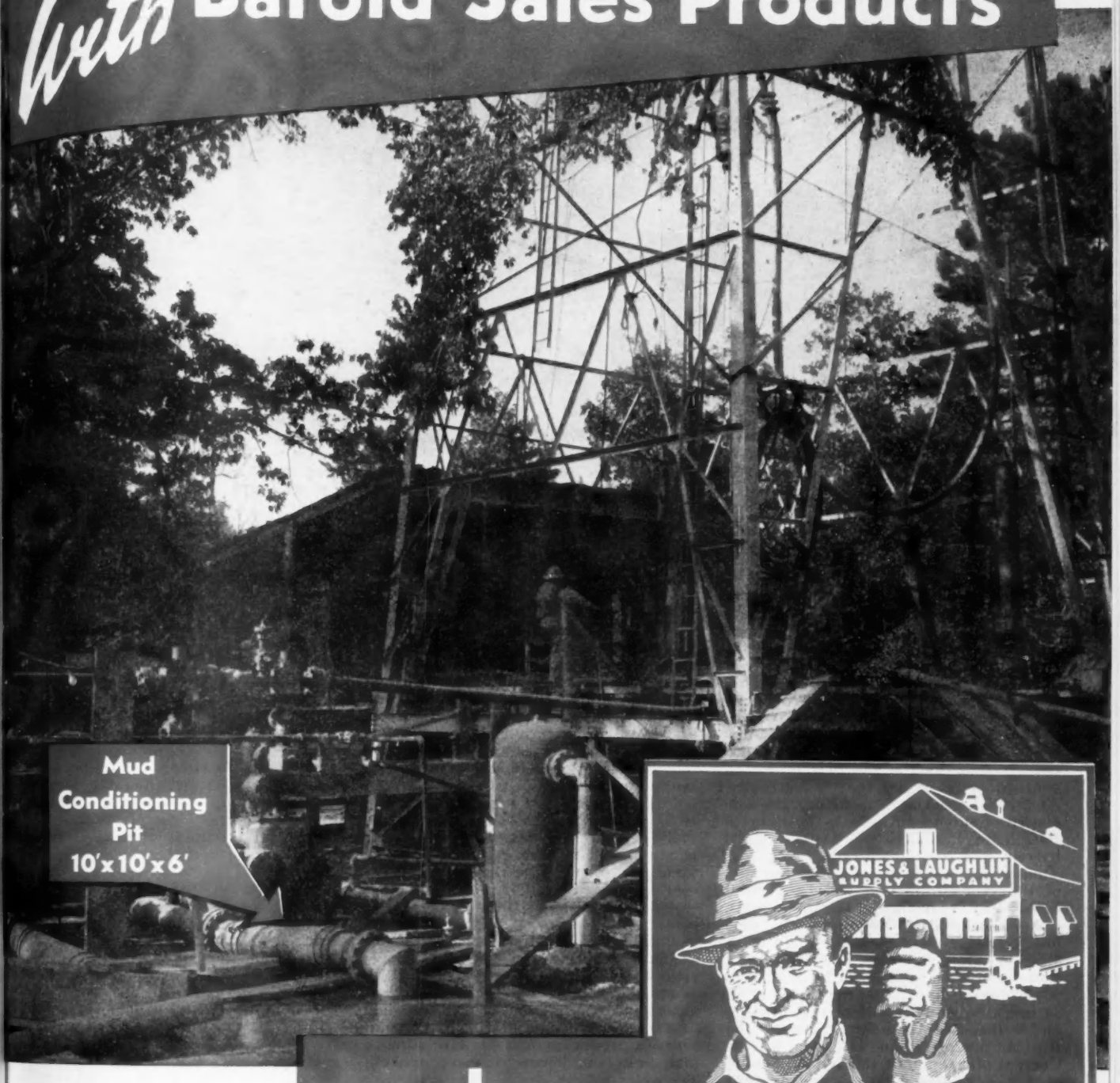

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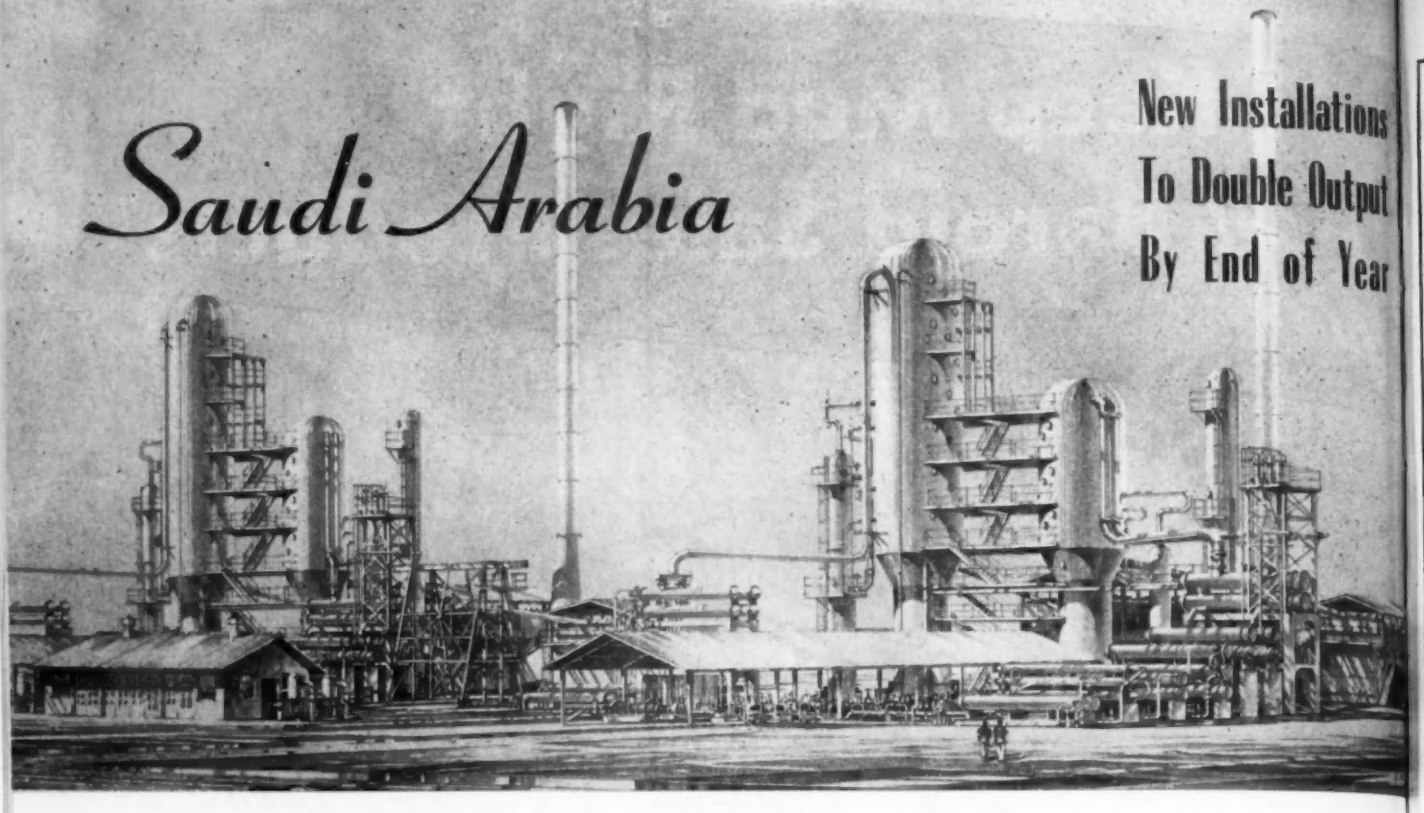


Arabian American Oil Company's new Ras Tanura refinery is to start operating at half capacity in September. It will reach full 50,000-barrel daily capacity by the end of the year.

By DON L. CARROLL, Foreign Editor

ARABIAN American Oil Company will begin operating its new refinery at Ras Tanura, on the Arabian mainland, early in September, when one of the two 25,000-barrel distillation units will be completed. By the end of December both units will be on stream, processing 50,000 barrels per day of crude oil.

These new facilities mean Saudi Arabia production will amount to 108,000 barrels daily by the end of the year in contrast with 58,000 barrels currently. At present the Damman field is the sole source of supply, furnishing the Bahrein Petroleum Company plant with 55,000 barrels and the small refinery at Ras Tanura with 3000 barrels. By the end of the year production will be derived from both the abqaiq and Damman fields.

A 10-inch, 60,000-barrel capacity pipe line connects the Damman field with Ras Tanura, 39 miles northeast. The Bahrein refinery is served by a 12-inch 60,000-barrel line from the field. It is 34 miles long, with half of this mileage under the Bay of Salwa, between the Arabian mainland and Bahrein Island. Current plans include the laying of a 40-mile, 12-inch line from the Abqaiq field to the Damman field, where a stabilization plant is located. Here, all crude that is sent on to Ras Tanura and Bahrein is desulphurized. The newly discovered one-well Qatif field is on the route of the present line. Thus its future development will involve only the laying of gathering lines and the erection of a second stabilization plant, if required.

Arabian American Oil Company has drilled 39 wells within its 450,000-square mile concession in Saudi Arabia, not including two wells in the Damman field that did not reach the producing horizon. All the wells have been drilled in the El Hasa area, and all but four on the shores of Salwa Bay.

Of the 39 wells, three have been dry exploratory tests. Most important of these was the El Jauf well, which was drilled to more than 10,000 feet. A test at Ma Agala was carried somewhat below the Bahrein producing horizon. A test at El Alat was carried only through the Bahrein zone, hence is not considered significant.

The first discovery was made in 1938 at Damman with a completion in the shallow Bahrein pay section. Two other Damman wells were completed in the same pay zone before the domed structure was tested to the Arab oolitic limestone horizon, approximately 2000 feet below the Bahrein pays. Both the Arab and Bahrein formations are Cretaceous.

The three Bahrein sand wells have yielded less than 425,000 barrels of oil, as compared with more than 35 million barrels produced from 23 wells drilled to the Arab zone in the field, with an average producing age of hardly more than one year. There is one producing gas well.

Most of the Arab zone completion wells were plugged with cement when the Middle East area was threatened by the Germans in Egypt. The work of redrilling and putting them back into producing condition was started in the latter part of 1944, and now has been finished. No new wells have been drilled in the field, however.

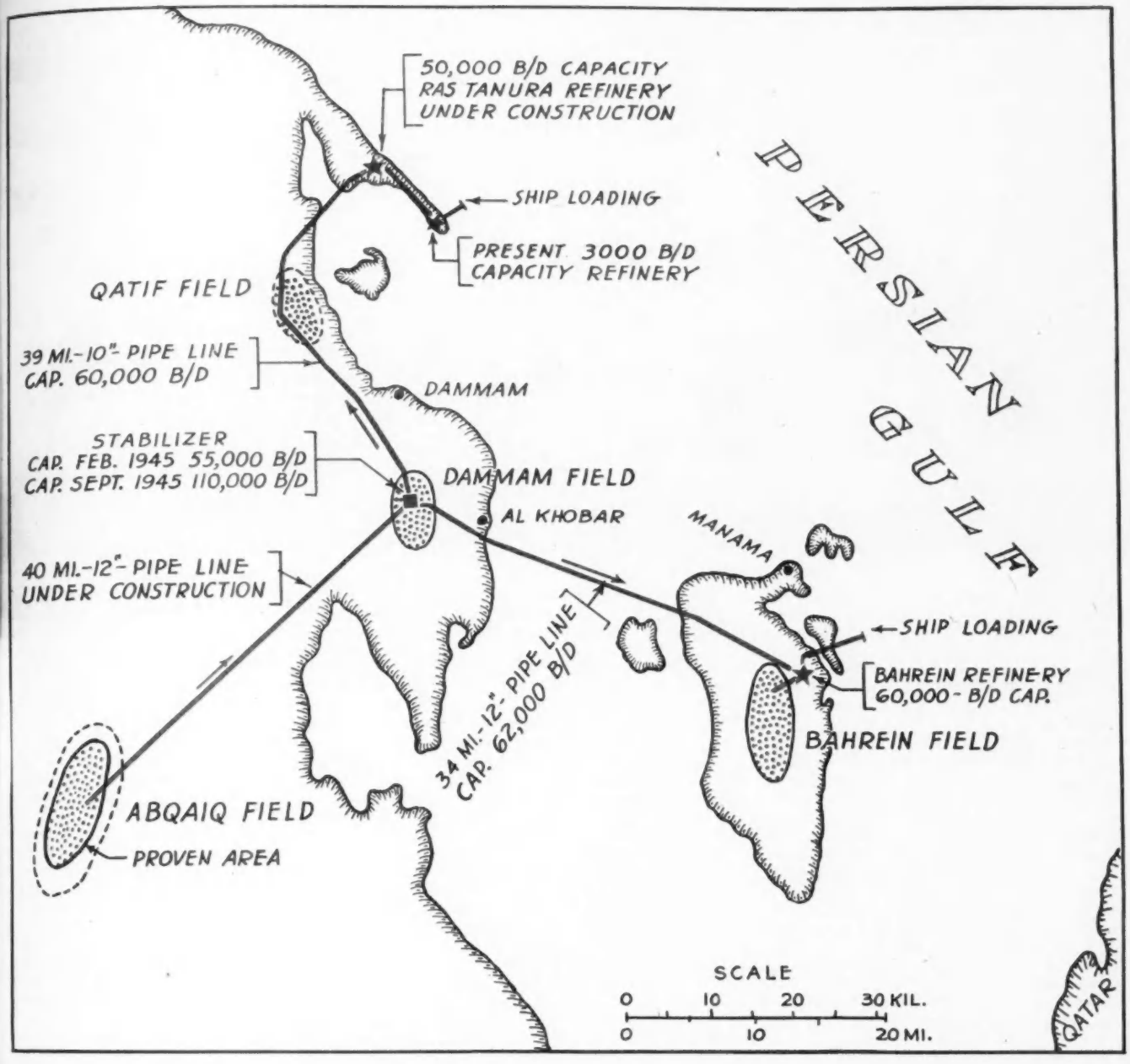
The Abu Hadriya field, north of Ras Tanura, was opened in 1940, and after satisfactory production tests of the discovery well, completed in the Arab zone, the well was shut in. An extension test, was started in 1941 to further prove the structure, but the operation was halted because of the more important discovery at Abqaiq, and has not been resumed Abu Hadriya produces from 10,000 feet, the deepest in Saudi Arabia.

The discovery of the Abqaiq field (1941) followed quickly by the drilling of five successful stepouts. Surface evidence, core tests for structure and geophysical surveys indicate the Abqaiq field will be larger than the Damman field when fully developed, though Damman field already comprises 8000 acres of proved territory. It is also evident that the Abqaiq wells are more prolific producers.

In February, 1945, the company completed a successful wildcat a short distance south of Ras Tanura, opening the Qatif field. While no other wells have been drilled on the Qatif structure, the field is rated a major discovery and will be developed as a proved reserve.

No wildcat drilling is planned in Saudi Arabia for the balance of this year, but the Arabian American Company expects to drill inside locations at Damman and stepouts at Abqaiq and probably at Qatif. The steps will be very widely spaced. Drilling will total about eight wells.

At Damman, the Arab pay section comprises four separate pay zones, representing oolitic member of phases in the limestone formation. There are two zones in the Arab section at Abqaiq and Qatif. Combined thicknesses of these prolific pays range from 350 feet at Abqaiq to more than 500 feet at Damman. Minimum porosity is 20 percent. Average gravity of Arab crudes in all three fields is 38 degrees, and



sulphur content is approximately 1 percent.

Drilling results in these fields indicate that future development will be on the basis of extremely wide spacing of wells. The combination of high porosities in the sands and high reservoir pressure, induced by very effective gas and water drives, indicate very wide spacing pattern may be found to provide optimum natural drainage. This would not be out of line with experience in Persia and Iraq.

The six Abqaiq wells average 6500 feet in depth, and those at Damman about 4500 feet.

The Damman structure is the only prominent surface dome on the Arabian mainland west of the Persian Gulf and north of Qatar. There are prominent domes on the Trucial Coast. On the basis of geophysical evidence it is presumed to be a salt dome. This interpretation is reasonable in view of the fact that similar features, many with exposed salt cores, are very common in southern Iran (Persia). Many of the islands in the area have also been clearly identified as salt domes. So far, however, no other probable salt domes have been found in Saudi Arabia proper. The other tested and untested structures in El Hasa appear to be comparatively symmetrical domed anticlines.

Since most of these structures are not reflected in surface outcrop patterns, or are found to be considerably offset at depth, seismographing and structure test drilling are now relied upon as exploratory methods.

Ras Tanura is the only point along the Persian Gulf coast of Saudi Arabia that is suitable for developing into a deep water harbor. It has a wide, deep approach from the main fairway in the Gulf, so that any ocean-going vessel can safely make its way into the port. A four-berth wharf has been constructed, extending ½ mile from shore to a water depth of 35 feet at low tide.

The 50,000-barrel refinery project was approved in February, 1944, when the only facilities at Ras Tanura were the pipe line terminal, the 3000-barrel refinery, a rock pier, two cottages and accommodations for 32 men. There were practically no available company stocks on the spot to start the project.

Materials for the permanent steel pier and personnel housing began arriving in April, but the first contingent of American workers did not appear until June. The skeleton construction force supervised native labor in the unloading of ships, building the pier and erecting camp structures.

A temporary power plant had to be built and put in operation, as well as repair and maintenance shops and garage facilities. More than 400 pieces of automotive and construction equipment were ultimately in use.

Since there were no roads in the vicinity when the work began, and very little road material available, it was decided to carry on the work without hard roads. All automotive equipment was therefore fitted with "sand tires," carrying eight pounds of air and having a minimum rim width of nine inches. Until good roads were put in, the tires served

This is the Qatif wildcat that last February discovered the New Saudi Arabia field. It is on the route of the pipe line between Damman field and Ras Tanura refinery.

the purpose very well. Practically all food required for American and native workers had to be shipped to Arabia, due to local shortages. Commissary storage now comprises 30,000 square feet of air conditioned space, with 6700 cubic feet of frozen storage space and 20,000 cubic feet of chilled storage space.

Under company supervision numbers of Arabs have been trained in required crafts, and some have become highly qualified. The refinery project required the employment of about 7000 additional natives, recruited mostly from the coastal towns. An intensive training program was inauguarted to develop necessary skills as rapidly as possible. In spite of their lack of background in construction work the Arabs proved to be apt students, and their efficiency increased rapidly. As an index of their general intelligence it is worth mentioning that they learned English much faster than the Americans learned Arabic.

The construction camp was completed early in 1945. Bunkhouses are 24-room units. The mess hall can handle the entire working force at one time. Other camp facilities include a large recreation hall, with lounges, bowling alleys, pool tables, soda fountain and library; an outdoor theater, and a fully-equipped 40-bed hospital. All quarters and general camp buildings are air-conditioned.

As the camp capacity expanded, the size of the construction force grew beyond that necessary for work on the camp itself, and actual work on the refinery got underway with the driving of the first foundation pile on November 19, 1944; but it was not until last February that enough trained men became available to make real progress in erecting the refinery.

The refinery equipment was fabricated in the United States in semi-assembled form to speed construction. In the cases of large vessels and other units too big to be handled on railroad cars, the assembly work was performed at tidewater in this country. A 125-ton derrick on the wharf at Ras Tanura was built to unload the heavy pieces. All piping three inches in size and up was prefabricated, and all electrical equipment was unitized for quick assembly at the refinery.

Storage capacity at the Nej Ma tank depot is approximately one million barrels. Consequently, about 70,000 barrels per day of oil are now being withdrawn from the wells at Damman. With 55,000 barrels of this amount being shipped across the bay to Bahrein, and 3000 barrels to the still-functioning small refinery at Ras Tanura, there is a daily excess for storage of approximately 12,000 barrels. Thus, when the new refinery begins to operate in September there will be filled storage tanks to service it, and plenty more oil in the fields to keep the tanks full for a long time in the future.

Dhahran is the field headquarters of Arabian American Oil Company. It is in the Damman oil field, principal oil source of Saudi Arabia.

The Outlook

A resolution providing for a study of all forms of transportation by the Interstate Commerce Committee covers pipe lines and will be approved in the fall by the House. Postwar disposal of War Emergency lines is next on the O'Mahoney committee agenda. See page 75.

* * * *

A big break in the Pacific war situation is beginning to meet with credence even in usually skeptical Washington offices. It may come upon Truman's return from Europe and could be capitulation or invasion. The Japs expect a landing at any moment.

* * * *

Railroads will break under the strain unless the Army modifies its redeployment program. The Army figured troop movement without regard to other demands upon the carriers.

* * * *

The administration faces a fight on its full-employment bill. Some agency officials, calling it a "hybrid economy," would place the responsibility for employment on private enterprise. Once the government gets into the field of employment, control of industry even stiffer than that sought under the National Recovery Act could result.

* * * *

Big allowables given many low-gravity oil fields augur for a big wave of prosperity that is heading up for the asphalt business. Big backlog in road funds (Texas alone has $72 million) spells record-smashing demand for asphalt and should result in elimination of posted oil price penalties.

* * * *

A serious manpower situation may arise if rig-builders and contractors cannot get together on differences regarding additional compensation for this labor. Interested governmental agencies are trying to work out an agreement.

* * * *

Many companies are reported dropping huge Mid-Continent leaseholds, concurrent with a tendency to slow down field operations. All operators are concerned with reconversion.

* * * *

Manufacturers of petroleum by-products who have had to expand facilities with government funds in order to fill war contracts are wondering if they will receive any advantage in the purchase of such facilities once the war is over.

* * * *

In spite of the fanfare over possible revocation of many WPB production limitation orders, only a trickle of civilian goods is in sight. Home devices, as a group, may be in short supply for a year or more.

* * * *

U. S. control by 1945's end of 1000 tankers (13 million deadweight tons) a capacity equal to the entire prewar world fleet, will be a mighty factor in dooming the two big war emergency lines as petroleum carriers. Tankers, it is claimed, can do the transportation job for 40 percent less.

* * * *

Permian Basin is going to jump up pretty fast in output, what with plans for additional unloading facilities near Longview for daily movement of about 25,000 barrels mixed sour crudes. An easier tank car situation will enable a heavier movement of these West Texas crudes to the Pacific Coast. See page 76.

* * * *

Surplus government planes won't be popular if the $60 per hour operating cost estimate holds, but the industry will turn out planes of lighter types that will operate for far less and personal flying will thus be encouraged.

* * * *

The future airplane likely will combine advantages of propeller drive and jet thrust by means of a gas turbine engine, development of which is receiving strong backing.

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Taylor Forge & Pipe Works
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and others.

The Week's News

ODDS that Secretary Ickes will shortly be out of the cabinet lengthened last week when he admitted that he "didn't know" whether he would go to London for the Anglo-American petroleum agreement negotiations, as recently announced by President Truman. Ickes' statement indicated that, as reported, he would seek a clarification of his status immediately upon the President's return from Europe. The last man to demand a "showdown" was *former* Secretary of the Treasury Morgenthau. Page 74.

Ickes Against Argentine Deal—Meanwhile Ickes disclosed that he had joined the attack on the United States-Argentine barter of fuel oil for vegetable oil and has asked the War Mobilization Director for a "justification." Basic reason for Ickes' opposition to the deal is believed to be the fact that other Latin American countries, which actively engaged in the war against Germany while Argentina was still a Nazi haven, are equally in need of oil, which they cannot get. The deal is scheduled to be investigated this fall by a House committee. Page 75.

British Missed Opportunity—Britain again "missed the bus" by failing months ago to take advantage of the neutralization of German sea power to launch a drive through the Netherlands East Indies, which would have shortened supply lines for both American and British forces in the Pacific, according to Senator Thomas C. Hart of Connecticut, a former admiral. Such a campaign would have opened a route for oil supplies from the Middle East, perhaps have gained the Sumatra oil fields.

German Synthetic Oil Plants—Suppression of Germany's synthetic oil industry, as one step toward saving the next generation from another world war, is receiving favorable consideration in Washington. Aside from serving as a security measure, such a move would safeguard the petroleum interests of the United States and England, both looking for postwar world markets and fully aware of the possibility that German science might lick the cost factor in synthetic oil manufacture—also of Russia, which sooner or later may come into the world market as a seller if her internal economy permits, in an effort to obtain foreign exchange needed for material and equipment purchases here and in other countries. American millions and years of research will be saved by reason of German developments, a recent United States mission discloses. Page 80.

FPC Denies Oil Intent—Declaring the Federal Power Commission "has enough headaches already," Chairman Basil Manly wrote PIWC Chairman William R. Boyd, Jr., that his agency has no intention of invading the field of petroleum regulation. Oil industry skepticism of commissioners' oral statements to that effect prompted the promise in writing. Story below.

Pipe Line Investigations Stack Up—The FPC investigation of natural gas transportation will not be the only probe of pipe lines to be undertaken this year. Shortly after the commission gets into its stride, the Senate Petroleum Investigating (O'Mahoney) Committee is expected to hold hearings on the disposition of war emergency pipe lines, to be followed by a House investigation of transportation generally, which will include both gas and oil pipe lines. Page 75.

Fight for "Critical" Exploration—PAW and PIWC are making a fight to have petroleum exploration work included on the list of critical activities. Page 77.

Texas Oil to West Coast—Tank car movement of West Texas crudes to the Pacific Coast is increasing. Longview unloading facilities are being checked for daily movement of 25,000 barrels Permian crude to serve the Big Inch. Page 76.

Drilling Cost Option—Congress has formally approved the intangible drilling costs option, the Senate last week favoring a House resolution on the subject. Page 80.

Helium Production Curtailed—Drop in military requirements has caused curtailment in helium production activities. Research will be pursued at Amarillo plant. Page 74.

International Bank for Oil Funds?—Great Britain is said to have in mind for inclusion in the Anglo-American oil agreement a plan whereby oil royalties due Middle East rulers would be handled by an international bank. Page 74.

No Intent to Invade Petroleum Field, FPC Chairman Assures Industry

The oil industry last week received a definite promise in writing that the Federal Power Commission would not invade the field of petroleum regulation.

In a letter to William R. Boyd, Jr., chairman of the PIWC, FPC Chairman Basil Manly amplified assurances which he and his associates gave at the council meeting July 18 that the commission has no interest in either oil production or pipe lines.

At the council meeting Manly was sharply questioned by oil men as to the scope of the proposed natural gas investigation which will be opened by the commission in September. Impressed by the concern exhibited by the oil industry, he amplified his statements before the council in his letter to Boyd, which he urged be publicized throughout the industry.

Manly, in his letter, pointed out that on December 30, 1944, he wrote Governor Andrew F. Schoeppel, chairman of the Interstate Oil Compact Commission, that the FPC has no desire to extend its jurisdiction to cover the production of natural gas "or otherwise invade what are properly regarded as the functions of the conservation authorities of the several states."

"At the time the above letter was written it was believed that this declaration should be sufficient to completely reassure those who had expressed some apprehension that the commission might be seeking to extend its jurisdiction over the production of natural gas or in some other manner interfere with the several states in the exercise of their respective authorities with regard to natural gas," he wrote Boyd.

"It now appears, however, that similar fears have been expressed that the commission might be seeking to extend its jurisdiction to the production of oil or to establish some degree of regulatory authority with respect to petroleum pipe lines.

"No Desire or Intent"

"It seems desirable therefore to declare in unequivocal language that the commission has no desire or intent to extend its jurisdiction as regards either oil production or petroleum pipe lines. In addition to other good reasons, we have enough headaches already in dealing with the difficult but highly important problems related to the interstate transportation and sale of natural gas."

That statement, Manly said, should cover the questions raised at the council meeting by Judge J. C. Hunter, president of Mid-Continent Oil and Gas Association; Ralph T. Zook, president of Independent Petroleum Association of America; George A. Hill, Jr., president of Houston Oil Company of Texas; and A. Jacobsen, chairman of PIWC national oil policy committee.

"On the basis of the questions raised

Helium Production Curtailed

Reduced military requirements are reflected in lessened demand for helium, and the Interior Department on July 28 suspended production activities at the Cunningham, Kansas and Amarillo, Texas, plants, the latter temporarily but the former for dismantling.

Current and future military needs for the gas will be met by the Exell, Texas, and Otis, Kansas, plants, both of which were constructed during the war and embody the latest designs and most modern production methods. The Amarillo plant, which was the first to be built will be maintained in stand-by condition for use in case of necessity and will become headquarters for an expanded helium research program.

It was explained that the Cunningham plant will be dismantled, partly because of the limited gas reserves in the area.

The expanded research program will include studies on the use of helium as a tracer gas in connection with the determination of oil and gas reservoir conditions; shielded-arc welding, heat treatment of steels in an atmosphere of helium, and other uses applicable to operations at industrial plants.

by other petroleum executives during the meeting of the PIWC," he added, "it would appear to be desirable also to re-emphasize that, while the outline of the natural gas investigation necessarily covers a number of topics which are obviously matters of state or local concern, such information is being sought in order to provide a complete and correct picture of the entire industry and not as a basis for asserting or seeking any measure of regulatory authority over such matters on the part of the Federal Power Commission.

"The commission in its conduct of the natural gas investigation has no axes to grind or preconceived ends to serve. We are seeking the facts regarding matters of vital importance to the entire nation and are glad that the petroleum industry, as represented in the PIWC, is arranging through appropriate committees to present such evidence and views as it considers of importance to the investigation."

Committee Named

The natural gas industry, meanwhile, continued its preparation for the hearings, announcing that the presentation will be arranged by a steering committee with the following membership:

E. Buddrus, Panhandle Eastern Pipeline Company, Chicago; D. D. Harrington, Hagy, Harrington and Marsh, Amarillo, Texas; Paul Kayser, Gulf States Oil Company, Houston; Joseph Bowes, Oklahoma Natural Gas Company, Tulsa; William H. Wildes, Republic Natural Gas Company, Dallas; Walter Beckjord, Columbia Gas and Electric Company, New York; J. F. Robinson, East Ohio Gas Company, Cleveland; R. W. Hendee, Colorado-Interstate Gas Company, Colorado Springs; William Moeller, Southern California Gas Company, Los Angeles; B. R. Bay, Northern Natural Gas Company, Omaha; F. S. Kelly, Arkansas Natural Gas Company, Shreveport, Louisiana; N. C. McGowen, United Gas Pipe Line Company, Shreveport; John A. Ferguson, Independent Natural Gas Association, Washington; S. B. Irelan, Cities Service Gas Company, Oklahoma City; Rex Baker, Humble Oil & Refining Company, Houston; Don Emory, Phillips Petroleum Company, Bartlesville, Oklahoma; Richard Alden, Phillips Petroleum Company, Bartlesville; E. L. Rawlins, United Gas Pipe Line Company, Shreveport; E. V. Kesinger, Natural Gas Pipeline Company, Chicago; R. H. Hargrove, United Gas Pipe Line Company, Bartlesville.

Six subcommittees have been set up, as follows: Gas reserves, W. H. Wildes, chairman; State commissions and public interest, D. A. Hulcy, Lone Star Gas Company, Dallas, chairman; Interstate natural gas pipe line economics, E. V. Kesinger, chairman; Natural gas utilization, end use and competitive fuels, R. H. Hargrove, chairman; Chemical use of natural gas, Richard Alden, chairman, and Natural gas production and gathering, E. L. Rawlins, chairman.

The several groups will use the services of E. Holley Poe and Associates, natural gas engineers, as well as other consultants and personnel from the industry in coordinating the material to be presented.

Ickes May Resign Before Discussions on Oil Pact

Virtually admitting that he would seek a showdown on his status as a member of the cabinet, Secretary Harold L. Ickes told a news conference July 26 that he doesn't know whether he will go to London for the negotiation of the Anglo-American petroleum agreement and has not yet made any arrangements for such a trip.

Ickes refused to say definitely that he planned to ask President Truman to clarify the situation when he returns from Europe, but in answer to a suggestion from a reporter that "you don't know whether you want to go or not" said "I think that would be a fair way of putting it."

Previously, in talking with the PIWC at its last meeting, the secretary is said to have told the oil men, in effect that "I don't want to go to London like Stettinius went to San Francisco."

At his news conference, Ickes said he had no knowledge of reports that he might become oil "czar" at a salary of $50,000 a year. "Is that salary or expense money?" he asked the reporter who raised the subject.

Indiana Standard Names Financial Vice President

Rubert J. Lindquist, present vice president, treasurer, comptroller, and a director of Curtiss-Wright Corporation, will on September 1 become financial vice president of Standard Oil Company (Indiana), according to an announcement by Robert E. Wilson, chairman of Standard's board.

British May Suggest International Bank to Handle Middle East Funds

The British government reportedly is nursing a proposal to be offered during the forthcoming negotiations on the Anglo-American petroleum agreement, for establishment of an international bank to handle the royalties payable Middle East rulers after the war when oil concessions in that area are to be developed.

Oil companies would pay their royalties into the bank instead of directly to the governments of the countries in which they had producing properties, and the bank, in turn, would distribute the funds in such a way as to prevent dislocations of internal economy such as might result from a sudden inflow of "easy" money or from a subsequent sharp reduction of income if operations should be curtailed.

Ostensibly, the reported proposal is in line with a clause in the original draft of the treaty calling for the development of oil resources and the benefits therefrom to be handled in such a way as to encourage sound economic advancement. However, the plan is being carefully studied by some who see political implications in it and point out that it could be used to keep the Middle East countries "in line." All countries whose nationals hold concessions in the areas would be represented in the bank. It is generally admitted, however, that it probably would be better for the Middle East countries to have an assured steady flow of income instead of sudden wealth and later, possibly, less wealth. Details of the plan have not yet been worked out, it was said, but will be completed in time for discussion at the London negotiations which are to be held next month.

Humble Suit Dismissed

The Fifth Circuit Court of Appeals has dismissed without prejudice an appeal of Humble Oil & Refining Company to set aside the government seizure of the company's Ingleside refinery near Corpus Christi approved by Federal Judge T. M. Kennerly a month ago.

Lea Committee's Probe Will Include Both Oil and Gas Pipe Lines of U. S.

One of the first matters to come before the House Rules Committee when Congress reconvenes in October will be the Lea resolution authorizing an investigation of the national transportation situation with a view to developing postwar policy.

The measure would authorize the transportation subcommittee of Representative Clarence F. Lea's Interstate and Foreign Commerce Committee to study transportation by rail, highway, water, air and pipe lines, both oil and gas.

The investigation, planned to get under way around the turn of the year, would coordinate the various types of transportation, each of which, Lea pointed out, has been developed independently of the others.

"Our planning to date for a national transportation system geared to a postwar United States has been sporadic, haphazard and uncoordinated," Lea said.

"Today we have the problem of a general transportation system—a system composed of important competing agencies—including transportation by rail, highway, water, air and pipe lines. Each of these types of transportation is capable of performing a service that in some respects has advantages over all of its competitors. The nation has the problem of coordinating these different types of transportation with a view of best serving the interest of the nation and with fairness to the competing agencies.

"There is a vast network of pipe lines throughout the United States. These facilities are being expanded and are a potent force in the changing areas of production and distribution.

"In the light of profound changes in the economy of this industry and its relation to the country, we must adjust legislation and administrative control to an entirely new set of conditions. Obviously, the primary function of all agencies is to render adequate, efficient and convenient service for shippers and travelers at the most reasonable charges consistent with the most enlightened treatment of labor possible under any given set of conditions. Charges for services should be as low as they can be made without sacrificing the sound standards evolved from the experience of many years."

Ickes Seeks Justification Of Argentine Oil Barter

A complete "justification" of the United States-Argentine trade of fuel oil for linseed oil was asked from War Mobilization Director Fred M. Vinson by Secretary Ickes a few days before the former took over as Secretary of Treasury, it was revealed last week.

The matter is pending before Vinson's successor, Mobilization Director Snyder, and no response has yet been received, Ickes said.

The secretary said that residual fuel oil is likely to be the scarcest petroleum production in this country next winter.

However, he said, he has not yet taken the position that there is not enough oil to meet domestic needs and fulfill our obligations to the United Nations and leave any for shipment to other countries.

His opposition to the deal engineered by the Foreign Economic Administration and the State Department is believed to be based on the fact that oil will be supplied to a country which was, to say the least, late in getting on the United Nations band wagon while other countries, which have been actively engaged in the war, are equally in need of supplies.

Ickes indicated that so far as he knew no oil has been shipped to Argentina, but in other quarters it was said that a tanker load was dispatched before the arrangement became known to the public. However, it is understood that no further shipments have been made and that the deal has bogged down, due principally to the fact that Argentine is unable to supply flaxseed and linseed oil in the quantities originally contemplated.

The deal called for supplying Argentina with approximately 500,000 tons of Caribbean heavy oil in return for an equivalent amount, on a heat-content basis, of vegetable oil and flaxseed which was to go to Europe for use in the devastated countries.

Ickes Says Kenny Quiet On Proposed Legislation

California Attorney General Kenny has made no response to the suggestion that he join in support of a bill to be a substitute for the legislation now in Congress. Quitting the title to all submerged lands except tidelands, Secretary Ickes said last week.

Meanwhile, it is disclosed the attorney general of Florida has petitioned the Supreme Court for permission to file an original suit to test the question of tideland ownership. The motion has to be passed upon by the full court and accordingly have to wait until the 1945-46 term opens in October. The Interior Department is watching closely the Federal Power Commission's natural gas investigation, although there are no indications that it will take any active part in the inquiry.

Secretary Ickes disclosed that the commission has asked for certain factual information from the Geological Survey and Bureau of Mines, which are the sources of such data, but did not explain whether the material was concerned exclusively with gas or involved petroleum as well.

Crude Oil Production in the United States

(Estimates compiled by The OIL WEEKLY. All figures indicate daily averages, in barrels.)

STATE OR DISTRICT	PRODUCTION IN WEEK ENDED July 28	July 21
Alabama	1,000	950
Arkansas	79,750	80,200
California	949,700	950,200
Colorado	11,800	10,700
Florida	200	250
Illinois	199,900	204,400
Indiana	13,350	12,900
Kansas	278,450	282,350
Kentucky	29,600	30,400
Louisiana	367,250	367,550
North Louisiana	70,400	70,700
South Louisiana	296,850	296,850
Michigan	45,300	53,900
Mississippi	51,650	52,300
Missouri	100	100
Montana	24,185	23,510
Nebraska	850	900
New Mexico	104,100	104,100
New York	13,250	13,550
Ohio	6,350	6,250
Oklahoma	390,400	390,750
Pennsylvania	36,200	37,550
Tennessee	35	35
Texas	2,209,350	2,209,350
Upper Gulf Coast	568,900	568,900
East Texas Field	379,500	379,500
Rest of Eastern Texas	139,050	139,050
Lower Gulf Coast	255,400	255,400
Southwest Texas	83,750	83,750
South Central Texas	21,500	21,500
West Texas	521,400	521,400
North Texas	152,350	152,350
Panhandle	87,500	87,500
West Virginia	8,000	8,900
Wyoming	114,900	115,350
Total United States	4,935,670	4,956,445

Louisiana Asks Bids on Tract 30 Miles Offshore

The State of Louisiana has offered for lease an area of about 650,000 acres approximately 30 miles off shore and under the Gulf of Mexico for oil development. Action is set of August 14 and successful bidders are to be required to drill within 5 years.

The tract offered, roughly 30-by-30 miles, extends southward from a section of the coast between Marsh Island and Point Au Fer, on west-east between longitudes 91 degrees 51 minutes, 11.028 seconds to 91 degrees 20 minutes. The northern boundary is irregular, but the southern boundary is a straight line described as "south 66 degrees 30 minutes and 38.12 seconds east."

Some of the section offered already has been explored by oil companies.

Darley Resigns Post

E. O. Darley, examiner for the Texas Railroad Commission, has announced that he will resign, effective August 20. This leaves vacant an important post since the examiner hears virtually all cases involving proration problems and exceptions to commission regulations.

Darley received only $3100 annually but the position will pay $4200 a year in September when the new fiscal year begins.

West Coast Getting More Texas Oil; Added Flow to Big Inch Being Checked

Tank car shipments of West Texas crude to the Pacific Coast averaged 36,716 barrels daily during the week ending July 22, an increase from the 31,455 barrels daily shipped the preceding week.

The movement will be expanded through the routing of about 75 cars daily from the Atlantic Pipe Line Company's Midland rack via the Texas Pacific railroad east to Sweetwater, Texas, thence over the Santa Fe railroad's more circuitous route to California.

Rail movement of sweet crude from the Fullerton and other fields to refineries in the middlewest averaged 7719 barrels daily the part week, while shipment of Ordovician crude from Pecos County to The Atlantic Refining Company's Philadelphia refinery has been temporarily concluded.

Meanwhile, the War Emergency Pipe Line, Inc., is reported checking on tank car unloading facilities near Longview with the plan of making arrangements for the movement of about 25,000 barrels daily of Permian Basin (West Texas) mixed sour crudes by tank car into the Longview area. The government agency also plans to build a temporary line from the unloading point to the Big-Inch's Longview station and tank farm.

Current reports say there is a temporary surplus of between 14,000 to 16,000 tank cars because of the termination of vast shipments of crude and refined products from the Gulf Coast. With the improved tank car situation, Interstate Commerce Commission is credited with cancelling special demurrage penalty put into force as a war emergency.

Natural and Texoma Would Increase Gas Facilities

Natural Gas Pipeline Company of America and Texoma Natural Gas Company have filed applications jointly with the Federal Power Commission for authority to extend their existing system and to increase its capacity from 268 million to 349 million cubic feet daily.

Texoma would add four new 1250-horsepower engines at its compressor station No. 22 in the Panhandle field, Texas; increase its facilities for removing water vapors and liquid hydrocarbons from the gas compressed, and loop the existing 24-inch main line with 26-inch pipe for a distance of 25.86 miles from a point near Gray, Oklahoma, Natural would construct a number of 26-inch loops parallel to the present 24-inch main pipe line aggregating approximately 265 miles, where no such loops now exist, together with smaller loops and lateral lines.

The petition was conditioned upon FPC's granting of an application to be filed by the Chicago District Pipeline Company for authority to acquire additional facilities necessary for the handling of natural gas to be purchased from Natural.

A hearing will be held at Kansas City, Missouri, August 7, on the application of Cities Service Gas Company of Oklahoma City for additional facilities to meet increased requirements for domestic gas next winter, especially in certain Kansas and Missouri areas.

The company proposes to construct 32 miles of 20-inch gas loop from its North Welda compressing station to its Ottawa station and increase the facilities of the two stations, at a cost of $868,225, to make available an additional 70 million to 85 million cubic feet of gas per day.

The FPC has approved the proposed disposition by El Paso Natural Gas Company of $1,603,848 in gas plant adjustments, including elimination of $925,000 of write-ups representing valuation placed on gas purchase and sales contracts and the company's franchise from the city of El Paso, and the writing off against earned surplus of $599,545, representing erroneous charges to plant accounts.

Natural Gas Investigation By Texas Group in August

The Chaddick gas investigating committee of the Texas Senate will hold its first hearings in August.

While the committee has not announced its procedure, the men on it are known to be fair, and industry may be assured that it will have an opportunity to present its case fully. It is possible that the transcript might well be presented to the FPC as the Texas record when the hearings are held in Kansas City in September.

Committees of the industry have been preparing for the Kansas City hearings, plan to have their evidence ready late this month and it is probable that the case will be ready to present in full when the committee meets in Austin.

Eminent Domain for Illinois Pipe Line

President Truman last week invoked the provisions of the emergency pipe line act to authorize the Texas-Empire Pipe Line Company to acquire, by right of eminent domain, approximately 17 miles of right-of-ways in three Illinois counties.

In a proclamation granting the company the authority, the President explained the action was necessary to permit the completion of a pipe line between Cushing, Oklahoma and Heyworth, Illinois.

Texas Commission Chairman Again Urges Line to Coast

Railroad Commission Chairman Olin Culberson of Texas has gone to bat again for the pipe line from West Texas to California. In telegrams to the President and to Senator James M. Mead, chairman of the committee investigating transportation, Culberson advocated the line as a solution to crowded transcontinental transport problems.

Culberson charged that six of the 12 months which bureaus thought would be required for completion of the pipe line, would be consumed by paperwork. He urged the President to cut the red tape and guaranteed that the line could be completed by January 1, 1946, if this were done.

He reminded Senator Mead that for more than a year the commission had urged this line which had first been refused officially by PAW in June, 1944.

New Shale Extraction Process Said Successful

A new process of extracting crude oil from shale has been under experiment by Socony-Vacuum Oil Company, and recent announcements by that company indicate that it may be successful.

It is claimed that through the process oil can be extracted from the shale at a cost of less than $4 per barrel.

Ground shale, preheated to 500° F., is poured into the extractor, a tower 67 feet high. The shale dust spreads out over a series of plates one under the other. Meanwhile, hot gases are injected into the bottom of the tower and rise through the shale dust raising its temperature to 1000°. This heating frees the oil at the rate of from 20 to 30 gallons per ton, of shale. The process is continuous.

Oil Subsidy Changes

Subsidies for 21 crude pools situated in eight states, effective from July 1, were announced by OPA last week, together with the revocation of premiums formerly granted to the Mt. Carmel pool in Indiana and the Halley pool in Texas, because the pools do not qualify.

Additions to the subsidy list follows:

Arkansas: Urbana (Travis Peak), 15 cents per barrel.

California: Olinda (Upper B) Brea Olinda, 35 cents.

Indiana: Oakland College, 25 cents; Oaktown, 35 cents.

Kansas: Beaumont, 25 cents; Toulon, 7 cents; Welch, 12 cents.

Michigan: Bangor North, 20 cents; Beaverton West, 20 cents; Hamilton North, 25 cents.

New Mexico: Benson, 5 cents; Halfway, 35 cents; Maljamar North, 35 cents.

Oklahoma: Burbank, 35 cents; Flesher East, 25 cents; Rea, 35 cents; Searight, 5 cents; Thomas, 1 cent.

Texas: Clara Couch, 35 cents; Peters East, 25 cents; Wortham, 15 cents.

Industry Fights to Put Exploration On Critical List for War Manpower

Possible reduction in the list of essential activities, thereby affecting deferments for those engaged in technical exploration work is the latest manpower concern of the petroleum industry.

PAW has advised Petroleum Industry Committees of a possible reduction in the essential activities list by the Inter-Agency Committee on Essential Activities of WMC and that "exploration" may not be included on the list of critical activities.

Reduction in the essential activities list is to enable concentration of manpower in those industries which are of paramount importance to the peculiarities of the the Pacific war, it was declared.

Both PAW and PIWC have urged that exploration be placed on the critical activities list in order for the oil industry to meet wartime drilling requirements. At present, exploration is on the essential activities list.

The Manpower Sub-Committee of the Production Committee, District 3, PAW, under Chairman Ray H. Horton, has conducted a survey among geophysical and producing companies and all those contacted emphasized the critical need for men engaged in exploration work. Geophysical companies point out that:

1. Placing exploration on the non-essential list will affect both domestic and foreign exploration crews.

2. As a large percentage of the technical men are commissioned officers, trained personnel are not being released in great numbers by the armed forces.

3. Only a limited number of civilian technical replacements are available and if they leave one employer to go with another it will not benefit the war effort.

4. Waste of manpower, material and money that would result if random wildcat drilling were the only means of exploration would certainly be detrimental to the war effort.

5. The discovery rate for wells drilled behind properly conducted technical exploration is nearly 3 times that for random drilling.

In a recent letter to John M. Lovejoy, chairman, Manpower Committee, PIWC, Horton pointed out his committee "feels that the seriousness of this situation can not be over-emphasized and every effort should be made to see that exploration activities are included on the critical list.

"The technicians and trained professional personnel ordinarily engaged in exploration activities have been drawn upon heavily by the specialized branches of the armed services," he said, "with the result that an expanded program of geological and geophysical exploration is now being carried on with an absolute minimum of manpower.

"Some of the exploration organizations are down to the point where the loss of a single additional man will seriously affect their program."

Drilling of wildcat wells are covered as "critical" under "production" and will not be affected in the event of a change in the activities list.

The industry feels that the extreme importance finding and producing oil is properly recognized by the Inter-Agency Committee on Essential Activities and the situation appears somewhat more favorable than when it first arose.

Surplus Tanker Sale

The first tanker to go through the surplus disposal machinery will be offered at public sale by the Maritime Commission August 8.

The vessel is the bulk oil tanker YO-149 (ex-Fidelense), built in 1944, which has been declared surplus by the Navy. The vessel now is at Rio de Janeiro, Brazil, where it can be inspected.

Bidding will not be limited to American citizens.

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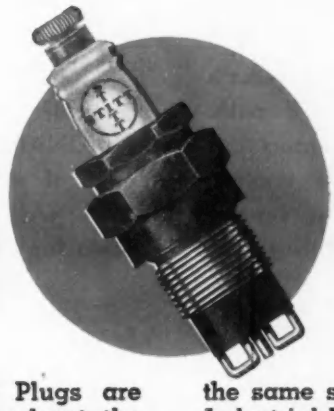

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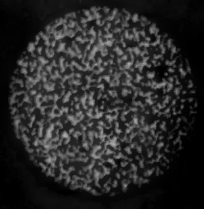

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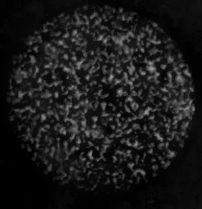

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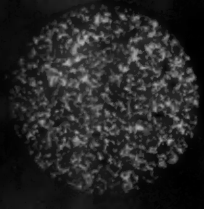

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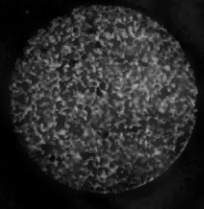

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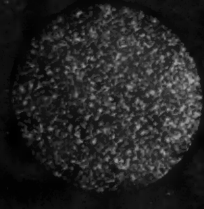

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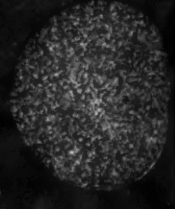

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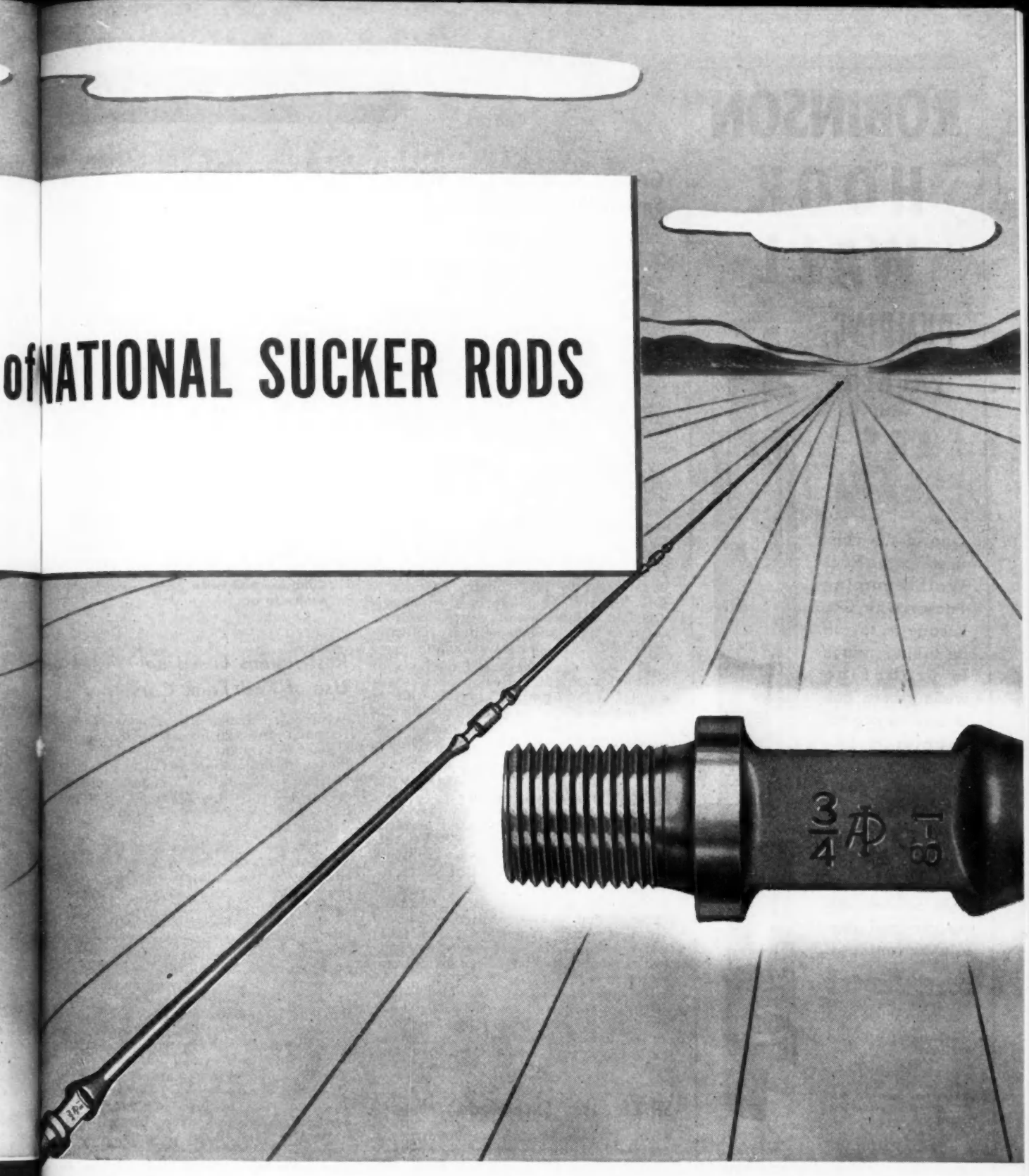

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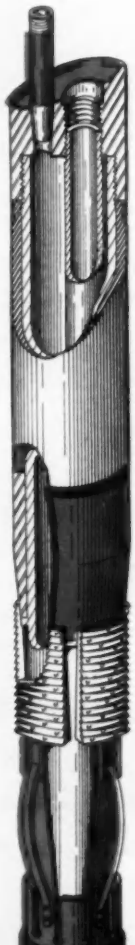

One of the chief uses for the Hook Wall Pumping Packer with Gas Escape is to run on tubing strings in producing wells where gas pressures are encountered that interfere with the pumping operation. It can also be used to pack off water in leaky casing.

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German Developments to Save Millions for U. S.

The recent four-months tour of German plants by a 22-man mission of government and industry experts headed by Dr. Wilburn C. Schroeder, chief of synthetic liquid fuels of the Bureau of Mines, will save the United States millions of dollars and years of research in the development of synthetic oil.

Developments of the German industry, for years jealously guarded, now are known in detail, Schroeder said, and it will not be necessary for American scientists to go over the same ground.

Schroeder said that the work of the mission will save the government a considerable part of the $30 million authorized to be spent over a five-year period in the development of synthetic fuel production methods.

Tons of patent papers and informational material were removed from ruined German plants and dug out from where they had been hidden, and will be shipped to this country for study. Full use will be made of the patents, it is said, and arguments over Germany's rights in them will be settled eventually by the Alien Property Custodian.

Application of American methods of production to the use of processes developed in Germany may within a reasonable period result in production of synthetic fuels at costs comparable with those of petroleum products, Schroeder said.

PAW Lifts Restrictions

Restrictions on the drilling of oil wells in California were relaxed by PAW, effective July 28, through amendment of supplementary order No. 4 to PAO-11.

Principal change is a revision of Exhibit A of the order, which lists proved California fields and pools and specifies the well spacing for each. A number of new pools have been added and some previously classified as single pools have been divided into two or more.

The order also has been amended to provide minor relaxation of boundary-line limitations for new wells on five-acre spacing and to remove restrictions on installation of pumping equipment in existing wells.

SP Licenses Extended

The Foreign Economic Administration has issued an order extending for one year all special project licenses which were valid and outstanding on July 1, 1945.

While FEA merely announced that the SP licenses would be extended, it was said that the order will be of considerable assistance to oil interests planning foreign operations. It was explained that the applications covering oil projects frequently cover a great range of items and are intricate, involving a great deal of work on the part of both the applicant and FEA, and the extension will avert the necessity of companies having to apply for additional time when they have been unable to make full use of their present licenses.

Senate Votes Approval of Drilling Costs Option

Uncertainties as to the fate of the option on intangible drilling costs were resolved last week with the adoption by the Senate, without change, of House Concurrent Resolution 50, declaring that in the various revenue acts beginning with that of 1918 Congress "has recognized and approved" the various Treasury regulations granting the option to deduct such expenses.

The resolution will be accepted by the Internal Revenue Bureau as a guide to the course to be followed as a result of the decision in the F.H.E. case, which upset the long-established practice. Following the decision of the Fifth Circuit Court, the bureau had announced that it would not make any change in its procedure until after the case had been finally decided by the Supreme Court or Congress had been given an opportunity to act.

Restrictions Eased on Use of Rail Tank Cars

Increased availability of tankers, was reflected July 26 in an order of the Office of Defense Transportation reducing the minimum distance for which railroad tank cars could be used without special permit from 200 to 80 miles and lifting the request for 24-hour-a-day loading of cars.

Reduction of mileage for the unrestricted use of cars will be effective throughout the country with the exception of Washington, Oregon, California, Idaho, Utah, and Nevada, where the 200-mile rule will continue to apply.

The ODT also revoked regulations governing the shipping of asphalt, which now may be moved for distances of more than 500 miles without permits. In another action, the ODT required that the largest-sized tank cars, with a capacity of 8200 gallons or more, be used in transporting petroleum to California, Idaho, Nevada, Oregon, Utah and Washington, and authorized use of cars with a capacity of 7000 gallons or more for use to New England, New York, Pennsylvania, New Jersey, Delaware, Maryland, West Virginia, Virginia and the District of Columbia. Smaller cars may be used without permits to the southeastern states, south of Virginia.

Rail Movement Declines

Rail and pipe line movement of oil to the East Coast is expected to decline temporarily during the availability of ocean-going tankers because of low stocks in the Gulf Coast area, it was disclosed by PAW last week. It is expected that the August rail tank-car movement will drop to less than 300,000 barrels daily, while pipe line tonnage is expected to be less than normal.

Gasoil, Residual Fuels Output Drops; Crude Production at Same Level

With emphasis on a decline in production of gasoil and residual fuels, the oil production and supply situation changed little during the week ending July 21 as compared with the week ending July 14. Crude production was held at 4,944,000 barrels, the identical figure for the previous week. Refinery runs also dropped 18,000 barrels daily, but in spite of the drop in amount of oil run through stills, crude stocks were further lowered by 895,000 barrels.

This decrease in crude stocks is persistent, showing an average for the year of 4.5 percent lower than for the same period during 1944.

Production of gasoline increased 81,000 barrels daily during the week, at the expense of the heavier products mentioned earlier, gasoil and residual fuel. Stocks of gasoline rallied during the week with a total of 529,999 barrels.

Gasoil output was off by 107,000 barrels, but stocks of distillate a kindred product, gained 654,000 barrels.

Yield of residual fuel dropped by 266,000 barrels. Demand was also affected resulting in a total increase in stocks of this product of 991,000 barrels.

Figures for the week ending July 21, as compared with the same period a year ago show the following: crude production now, 4,944,250 barrels, then, 4,615,450 barrels, or a gain during the year of 328,000 barrels daily. A gain of 16,900 barrels per day for August is asked by PAW, bringing the required crude production to 5,240,000 barrels, the highest figures yet known to the United States oil industry. Crude runs a year ago amounted to 4,677,000 barrels; now the figure is 4,927,000, a gain of 250,000 barrels.

Until the Japanese war is won, the emphasis will continue to be on gasoline and different grades of fuel oil. This can be more readily realized when it is understood that about 21,000 barrels of fuel oil are required to deliver 100,000 barrels of gasoline from the U. S. Gulf Coast to the Pacific theatre, including the return trip of the tanker, as compared with 8000 barrels in the case of the European theatre. As pointed out by PIWC recently, this does not take into account the fuel necessary to return dry cargo vessels. From now on this is largely a fuel oil war. The moderate decrease in gasoline requirements is more than offset by increased requirements for Diesel and residual fuel, and hence the total demand for crude and products is greater than before V-E day.

Trends of Operations and Changes in Stocks

Figures on crude stocks are from Bureau of Mines weekly reports; all others from American Petroleum Institute weekly reports, which are estimates on Bureau of Mines basis.
(All figures in thousands of barrels—add 000)

HIGHS AND LOWS OF RECENT YEARS

ITEM	Crude Oil Prod. Barrels Daily	Crude Oil Prod. Week Ended	Runs to Stills Barrels Daily	Runs to Stills Week Ended	Crude Stocks Barrels	Crude Stocks Week Ended	Gasoline Stocks Barrels	Gasoline Stocks Week Ended	Gasoil and Distillate Stocks Barrels	Gasoil and Distillate Stocks Week Ended	Residual Fuel Oil Stocks Barrels	Residual Fuel Oil Stocks Week Ended
Highs:												
1941	4,337	11-22	4,120	10-18	266,187	3-29	99,727	3-29	[5]54,983	11-15	102,448	1- 4
1942	4,337	2- 7	3,961	1- 3	263,208	3-28	[1]109,281	3-14	47,861	11-14	95,857	1- 8
1943	4,436	11-13	4,331	12- 4	245,752	5-29	94,159	3-20	47,187	11-27	72,881	1- 2
1944	4,762	9-30	4,798	12-30	240,992	1- 1	89,162	4- 1	48,863	10-28	64,744	10- 7
1945	[4]4,944	7-14	5,006	7- 7	224,079	6- 2	99,012	3-24	38,298	1- 6	56,074	1- 6
Lows:												
1939	[3]1,601	8-26	3,125	2-18	[2]229,127	10-12	71,152	10- 7	20,722	4-15	105,397	4- 3
1941	3,364	1-11	3,490	1-18	240,399	11-15	79,923	10- 4	28,382	4-12	90,914	7-13
1942	3,297	7- 4	3,393	5-23	231,896	12-12	75,934	12- 5	29,240	4-25	72,962	12-26
1943	3,821	1- 9	3,579	3-18	232,191	1- 9	68,182	10-16	30,732	4- 3	57,596	12-25
1944	4,357	1- 1	4,228	2-12	220,258	9- 9	76,302	1- 1	30,232	4-19	49,737	3-18
1945	4,678	1- 6	4,656	1- 6	216,355	7-14	85,401	7-14	26,483	3-17	38,548	5-26

TRENDS OF 1944 AND 1945

Trends in Week Ended:	Crude Oil Production Daily	Crude Oil Runs to Stills Daily	Crude Oil Stocks Week End	Gasoline Production Weekly	Gasoline Stocks Week End	Gasoil and Distillate Production Weekly	Gasoil and Distillate Stocks Week End	Residual Fuel Production Weekly	Residual Fuel Stocks Week End
1944:									
January 1	4,357	4,453	240,992	13,192	76,302	4,575	42,310	9,141	57,380
January 29	4,400	4,359	240,251	13,427	81,075	4,054	37,266	8,889	52,857
February 26	4,423	4,377	237,137	13,183	85,248	4,558	33,766	8,952	51,387
March 25	4,385	4,443	236,285	13,362	87,287	4,979	31,319	9,018	51,669
April 1	4,383	4,435	234,667	13,824	89,162	4,450	30,530	8,367	51,326
April 29	4,431	4,300	235,342	13,126	88,342	4,284	30,236	8,398	49,985
May 27	4,514	4,532	234,423	13,502	86,468	4,702	32,035	8,568	49,812
July 1	4,587	4,638	228,860	14,052	83,559	4,496	35,360	8,872	52,235
July 29	4,608	4,627	225,112	14,115	82,665	4,833	38,135	8,900	56,280
August 26	4,667	4,698	222,931	14,112	80,740	4,566	41,453	8,680	59,839
September 30	4,762	4,775	222,393	14,494	78,028	4,622	45,329	9,292	64,226
October 28	4,740	4,658	223,235	14,117	79,058	4,772	48,705	8,985	64,382
December 2	4,712	4,693	221,591	14,853	80,427	4,082	45,832	8,981	61,727
December 9	4,704	4,552	220,258	14,611	80,880	4,056	44,430	8,923	60,458
December 16	4,695	4,537	222,075	14,145	82,747	4,353	42,413	8,727	59,280
December 23	4,729	4,682	222,575	14,635	83,355	4,605	40,846	8,798	58,509
December 30	4,705	4,798	222,998	15,342	86,614	4,257	39,495	9,156	57,430
1945:									
January 27	4,727	4,756	221,310	14,957	88,223	4,843	33,651	9,252	51,119
February 24	4,777	4,803	219,351	15,500	95,972	4,958	28,753	9,084	46,713
March 31	4,781	4,677	223,782	14,644	98,758	4,548	26,889	9,184	41,745
April 28	4,805	4,780	223,474	14,633	94,068	4,636	28,273	9,379	39,813
May 26	4,887	4,950	222,831	15,194	89,121	4,667	29,184	9,670	38,548
June 2	4,859	4,804	224,079	15,317	88,696	4,857	29,819	9,437	39,022
June 9	4,853	4,827	221,552	15,256	87,896	4,842	30,339	9,382	38,996
June 16	4,888	4,915	221,932	15,132	87,504	5,342	30,397	9,252	39,482
June 23	4,898	5,002	220,974	15,367	87,462	5,014	31,761	9,558	39,893
June 30	4,903	4,999	220,781	15,546	86,472	4,910	32,213	9,077	40,488
July 7	4,886	[5]5,006	217,250	15,082	86,329	4,875	33,667	9,238	40,754
July 14	[4]4,944	4,945	[6]216,355	15,349	85,401	5,197	34,804	9,337	41,489
July 21, 1945	4,944	4,927	.....	15,430	85,930	5,090	35,458	9,071	42,480
July 22, 1944	4,615	4,677	[5]226,513	14,242	80,768	4,972	37,216	8,767	55,744
Change:									
In week	.....	—18	—895	+81	+529	—107	+654	—266	+991
In year	+329	+250	—10,158	+1,188	+5,162	+118	—1,758	+304	—13,264
In year	+7.1%	+5.3%	—4.5%	+8.3%	+6.4%	+2.4%	—4.7%	+3.5%	—23.8%

[1] All time peak. [2] Lowest between January, 1922 and July 1, 1944. [3] Lowest since October, 1922, due to shutdown of six Mid-Continent states. [4] Lowest since December, 1921. [5] Stocks, July 15, 1944.

PAW Distribution Director For District 3 Resigns

The resignation of Glenn P. Thompson as director of distribution and marketing of PAW District 3 has been announced by W. M. Averill, director in charge.

Thompson, a registered petroleum engineer, was formerly acting director of production for the Texas Railroad Commission at Austin. He joined PAW in September, 1942, and resigned to go with Tennessee Gas and Transmission Company with headquarters in Houston.

Dudley Cornell, who served as director of marketing from September, 1942, until September, 1943, has been appointed to succeed Thompson. Cornell also will continue with his duties as district counsel.

Capital Structure Increase Is Voted by Dallas Bank

The Republic National Bank of Dallas has voted a $5,000,000 increase in its capital structure. At a recent stockholder's meeting it was decided to increase the capital stock from $7,500,000 to $10,000,000, and the surplus from $7,500,000 to $10,000,000.

The increase was voted because of the increase in the volume of business and in anticipation of the expansion and new installations in the South by national and state concerns.

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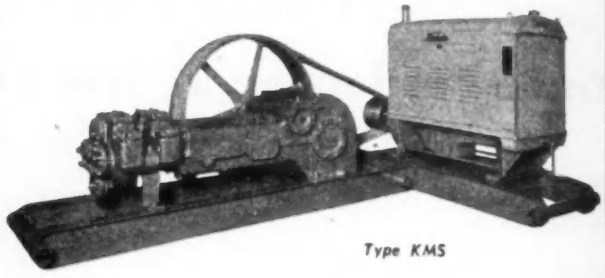

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T-G-T Contracts for Flare Gas from Barnsdall Company

Barnsdall Oil Company has contracted to sell Tennessee Gas & Transmission Company a minimum of 15 million cubic feet of natural gas daily from its Placedo, Texas, properties. This gas previously was without market and had been vented into the air. Announcement of the deal, which presages similar action by other companies with flare gas, was made by D. R. Snow of Tulsa, executive vice president and general manager for Barnsdall.

Barnsdall obligated itself to deliver flare gas from at least 75 percent of its wells in the Placedo area of Southwest Texas and the Tennessee company will start taking gas as soon as Barnsdall can install necessary gathering lines, compressor stations and dehydration plant. Before the flare gas can be put into the gas line it will be stripped of all liquid fuel, dehydrated and brought up to line pressure.

This is the second contract for flare gas in which Tennessee Gas & Transmisssion Company figures. In May the gas concern contracted for flare gas from three companies in the Stratton-Agua Dulce fields of Nueces County, Texas, and the following month supplemented the deal agreeing to take larger amounts of gas.

Tulsa Firm Gets Contract To Lay Oklahoma Gas Lines

Midwestern Engineers, Tulsa, Oklahoma, have been awarded a contract by Cities Service Gas Company to lay seven miles of 16-inch and two miles of 12-inch gas lines north of Nowata, Oklahoma, including a crossing of the Verdigris River at Lenapah. The contract also includes reclaiming of a 16-inch gas line near Quapaw, Oklahoma.

New Method Devised for Laying Submerged Lines

A new method of laying submerged pipe lines is being recommended to Engineer Petroleum Distribution Units in the Pacific.

This new method was found successful when one EPD company was faced with the problem of bridging a mile-wide gap between an offshore tanker anchorage and empty gasoline storage tanks on shore. The regular methods of building a timber pile-supported hose deck wouldn't work; there was too much mud.

A hydrographic survey showed that the ocean flood sloped gently from the sand beach to almost level mud bottom 30 to 35 feet below low tide level at a distance of 4600 feet from the shore. The engineers decided to construct a submerged pipe line of 8-inch welded steel line pipe.

The pipe was assembled into 600-foot sections on a ramp, and the sections joined by electric arc welding. When 4800 feet of pipe had been welded into 600-foot sections a bridle of heavy chain was welded to the seaward end of the first section for towing and for attaching a marker buoy. A timber "sled" was framed around the seaward end of the pipe and the line was ready for launching.

A net tender with a winch provided motive power for the launching. Two 12-foot triangular range markers were erected on shore to guide the tender.

When the line was fully launched the "sled" at the seaward end was loaded with concrete blocks to sink and anchor it. While a tractor held a slight strain on the pipe to maintain alignment, water was pumped into the pipe to sink the line. The total elapsed working time was 8 hours and 25 minutes.

Midland Producer Planning Five-Mile, Four-Inch Line

Ralph Lowe, Midland producer, has authorized the construction of a five-mile, four-inch pipe line from the Welch four-well pool, Dawson County sector of West Texas, to connect with The Texas-New Mexico Pipe Line Company's Slaughter-Midland system.

Booster Compressor Planned

Southern Counties Gas Company, Los Angeles, will install a 400-horsepower booster compressor at Lompoc, Santa Barbara County, on its eight-inch gas transmission line from the Santa Maria field to its underground gas storage project at Goleta.

The new installation will boost the line's capacity about 50 percent and permit the transmission of gas now unused in the Santa Maria field.

Phillips Buys Right-of-Way For Texas Panhandle Line

Phillips Petroleum Company has purchased right-of-way for the construction of a 12-mile, 16-inch natural gas line.

It will extend from shutin gassers in southwestern Sherman County to the Cactus Ordnance Plant near the north line of the Moore County sector, Texas Panhandle.

Missouri-Illinois Pipe Line Is 40 Percent Complete

Good progress is reported on Texas-Empire Pipe Line Company's 164 miles of 12-inch crude oil loop line which is being laid in the Sheldon, Missouri, and Hayworth, Illinois, areas with about 40 percent of the project completed and the balance expected to be turned in by September.

The section will complete the loop, giving the pipe line company two 12-inch lines and increasing capacity by 20,000 barrels daily. Contractors include Sheehan Pipe Line Construction Company, Willliams Brothers and the Sooner Construction Company, all of Tulsa, and H. C. Price of Bartlesville, Oklahoma.

Sinclair Accepting Bids on 15-Mile, 6-Inch Crude Line

Sinclair Refining Company, pipe line division, is taking bids for the immediate construction of a 15-mile 6-inch crude line to extend west from the Sivells Bend field, Cooke County sector of North Texas, to its Healdston-Fort Worth 8-inch trunk line near the south border of Oklahoma.

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Venezuela Field Opened On Creole's Concession

A new eastern Venezuelan oil field has been discovered by Creole Petroleum Corporation on its Capacho concession in extreme southwestern Cedeno-Monagas, the first field to be opened on a concession granted under Venezuela's 1943 petroleum law.

Capacho 1 has been completed as a 150-barrel producer, making 23-gravity oil from perforations at 4410-4470 feet in sand which is the equivalent of the Miocene pay in the Jusepin field. Depth is 4988 feet, with 5½-inch casing landed at 4646 feet. A second well is now being drilled 660 meters northwest of the discovery, and should shed some light on areal extent and future production possibilities of the new strike.

The wildcat is 18 miles westerly from the Mulata field, directly along the trend from Jusepin through Mulata, and is four miles south of the Creole-Mene Grande pipe line outlet to tanker terminals at Puerto La Cruz.

Drilling was undertaken on the strength of surface geology and reflection seismograph exploration, with further information contributed by core drilling in the area north of the discovery location.

Elimination of Exchange Controls to Be U. S. Goal

Elimination of all types of exchange controls now applied by foreign countries upon American trade will be sought by the State Department after the end of the war.

A number of letters have been received at the department from manufacturers who have been advised by their representatives abroad that the British authorities are declining to issue import licenses for certain American products and that the procedure likely will continue indefinitely.

In reply to these letters, department officials have taken the position that the general form and purpose of these exchange controls are appropriate and necessary to the successful prosecution of the war, but have no place in normal peacetime trade.

The objective of the department, it was explained, is to restore the right of foreign buyers to select their sources of supply "so that private industry can thrive and American goods and American exporters can compete around the world on the basis of the excellence and price of their goods."

Exchange controls on current transactions, however necessary in wartime, are restrictive of free competition, and the department "wants to see them ended as soon as practicable," it was stated.

Trinidad Marine Drilling Rights to Be Awarded

The British are expected to announce before August 31 the awarding of offshore drilling rights to operating companies in Trinidad. Prewar plans called for awarding of the rights and beginning of drilling operations sometime in 1941, but wartime shortages of equipment caused postponement of action.

It is reported that the awards will be based chiefly on present ownership of rights in abutting shoreline properties, although the comparative ability of the various interested companies to finance expensive marine drilling programs will be taken into consideration.

Extension Test Under Way In Eastern Venezuela

The Texas Petroleum Company has set surface casing and was drilling below 1500 feet on July 6 at Texas 4, double stepout east of the Texas 1 discovery well, which opened a new eastern Venezuela field in May, northeast of Tucupita, Delta Amacuro province.

Texas is also proceeding with development of its Rincon field, southeast extension of the Santa Ana field.

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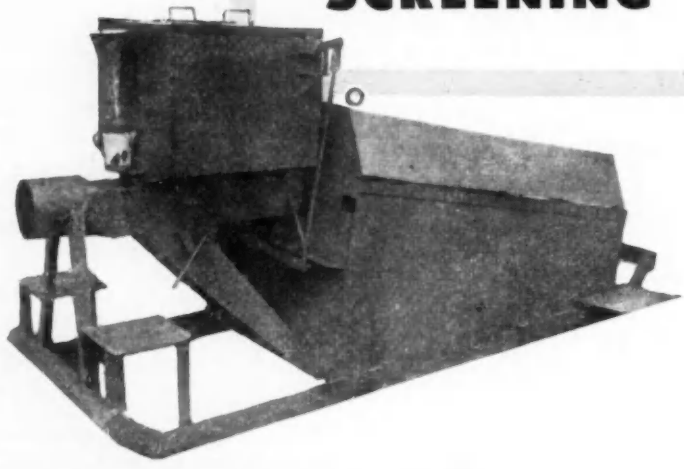

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Bartlesville Sand Well Opens Area Near Meridian Field

State gets 2 new pools; Bartlesville sand well opens new area southwest of Meridian; Gutowsky hits in area north of Edmond; Watchorn district wildcat looks like small producer; West Edmond reports Wilcox sand failure: deep Lawson test shut down, may set pipe for test.

Logan County: The Texas Company's Arundel 1, SE NE SW 2-15n-1w, southwest of the Meridian field, is a new Bartlesville sand pool opener. After overcoming water difficulties the well swabbed about 130 barrels of oil, no water, in 11 hours with considerable gas. The test was drilled to dry Wilcox sand at 5922 feet and plugged back to 5270 feet with the Bartlesville topped at 5238 feet.

Oklahoma County: Ace Gutowsky, Oklahoma wildcatter, appears to have opened a new producing area north of Edmond at Crum 1, NW NW SE 24-14n-3w, an estimated 75-barrel daily pumper from the Cleveland sand. After drilling to 6945 feet, the hole was plugged back to 5916 feet and casing perforated at 5823-31 feet. Oil tests nearly 40 gravity. Gutowsky plans to put the producer on pump and to start more work on his 3000-acre block.

Pawnee County: Two miles northwest of the Watchorn pool Sunray Oil Corporation has a small producer at Gilbert 1, NW SW NE 30-23n-3e, from the Layton sand topped at 2726 feet. Drilled to 2732 feet and given a light shot, crews swabbed about 30 barrels of oil in 12 hours and tubing was being run to complete. Southwest of Maramec, J. E. Crosbie, Inc., was preparing to drill-stem test shows in the Wilcox sand in Dewitt 1-B, between 2788-92 feet.

West Edmond: Denver Producing & Refining Company's Cargill 2-B, east side of the West Edmond pool, tested dry Wilcox sand and probably will be abandoned. It is about ½ mile northwest of Denver's Holmes 1, completed as a small well in the Bartlesville zone. The Cargill test missed the Bois d'Arc and was drilled to 7450 feet. It was one of the few Wilcox sand tests drilled in that part of the field and is offset on the north, south and west by Hunton lime producers.

McClain County: Cities Service Oil Company set 7-inch pipe at Lawson 1, CSW NW 22-5n-4w, key wildcat test north of Lindsay. Depth is 10,995 feet with pipe set at 10,992 feet and cemented with 1000 sacks of cement. Top of the Wilcox sand is believed to have been logged at 10,774 feet with the well bottomed in the Second Wilcox zone. More than 90 feet of saturation was reported, while drill-stem tests which were made secretly are said to have recovered considerable oil and gas. The wildcat may be one of the most important strikes in Oklahoma in recent years.

Cleveland County: Mid-Continent Petroleum Corporation was adding to its string of producers in the South Moore field as Jury 3, NE SE SE 26-10n-3w, flowed 450 barrels of oil in 4 hours through 1-inch choke from perforated Bartlesville sand at 7800-20 and 7753-83 feet. It was pinched back to 300 barrels a day. In the West Moore field, J. E. Crosbie, Inc., was testing Stotts 1-A, NE NW SE 30-10n-3w, after topping Wilcox sand at 8700 feet and drilling to 8734 feet.

Stephens County: About 5 miles southeast of Marlow, Gulf Oil Corporation drill-stem tested Briscoe Estate 1, C SE NW 36-2n-8w, and reported about 10 million cubic feet of gas daily from 7738-72 feet. Bottom hole pressure built up to 3950 pounds in 15 minutes and a slight show of distillate was reported. Operator was conditioning hole to drill.

Garvin County: After pumping 200-250 barrels of oil daily from Bromide sand at 5502 feet, Cities Service is deepening Abernathy 1, SE SW SE 13-3n-2w, discovery well for the East Antioch pool. Continental Oil Company's Butterly 1, NW SW SE 14-1n-1e, deep test in the Butterly gas pool, shot with 40 quarts at 4352-92 feet and hole was being cleaned out. The well showed heavily in the Pennsylvanian and Simpson zones and tested about 3 barrels of oil an hour in the Arbuckle, where it is bottomed.

Bethany Spacing Extension Hearing Is Postponed

Hearing by Oklahoma Corporation Commission on Phillips Petroleum Company and Kerlyn Oil Company's application for wider well spacing in the Bethany extension to the West Edmond pool of Central Oklahoma has been postponed until September 4. Action was taken after a conference of company attorneys and representatives for the land owners who oppose the move.

The companies seek to have 20 sections in township 12n-4w removed from the West Edmond spacing order and to have the commission create a new spacing pattern. Two gas-distillate wells have been completed in the Bethany area, each finding the Hunton Lime zone deeper than in the West Edmond pool. Companies claim this is a new structure and wells should be more widely spaced while the land owners maintain that 40-acre well spacing will permit economic operation of the new sector.

Wells Completed in the United States in Week Ended July 28, 1945

Data preliminary and subject to revision. Revised and more complete data on all completions shown in monthly summary of drilling, published in second issue of each month. More detailed data on wildcats published in third issue of each month.

State or District	FIELD COMPLETIONS: New Wells *Oil	Gas	†Input	Dry	Total	Old Wells Deepened	WILDCAT COMPLETIONS: *Oil	Gas	Dry	Total	ALL COMPLETIONS: This Week	Last Week	Cumulative: This Year	Last Year
Alabama	1				1				2	2	3	1	21	17
Arizona														6
Arkansas	2				2				2	2	4	7	106	135
California	45				45				4	4	49	50	1,251	1,154
Colorado		1			1						1	3	18	14
Florida													10	1
Georgia												1	6	2
Illinois	27			16	43	4			9	9	56	36	980	1,050
Indiana	3			2	5	1			1	1	7	14	178	168
Iowa													1	2
Kansas	19	1	1	7	28	1			4	4	33	42	934	1,030
Kentucky	7				7						7	12	246	415
Louisiana	11			4	15				2	2	17	18	570	428
North Louisiana	1			1	2				2	2	4	7	205	148
South Louisiana	10			3	13						13	11	365	280
Michigan	2	1		1	4				8	8	12		417	373
Mississippi	2			1	3		2		3	5	8	8	217	105
Missouri												1	18	18
Montana	7			2	9						9	16	126	182
Nebraska													3	7
New Mexico	7			2	9				1	1	10	5	245	235
New York	15		10		25						25	25	606	734
Ohio	2	2		3	7						7	13	409	496
Oklahoma	29		3	10	42	3			8	8	53	51	1,354	1,017
Pennsylvania	27	5	15	1	48						48	56	1,566	1,677
Tennessee													2	9
Texas	63	13		29	105		1	2	21	24	129	165	4,180	3,415
E.Tex.Bor. Co.'s	1	1		2	4				1	1	5	2	50	13
E. Texas Field														3
Rest of E. Texas				2	2						2	6	128	174
North Texas	13			11	24				5	5	29	49	976	795
W. Central Tex.	2			2	4				4	4	8	9	272	225
West Texas	25	1		5	31				2	2	33	36	1,059	898
Tex. Panhandle	3	9		2	14						14	9	339	144
G. Coast, Upper	4			1	5		1		2	3	8	10	399	316
G. Coast, Lower	13	2		2	17			2	5	7	24	24	609	536
Southwest Texas	2			1	3				2	2	5	17	292	254
S. Central Tex.				1	1						1	3	56	57
West Virginia	6	16		5	27	1					28	8	457	522
Wyoming	4				4				1	1	5	11	88	90
Total U. S.	279	39	29	83	430	10	3	2	66	71	511	543	14,009	13,302

* Includes distillate wells. † Includes salt water disposal wells.

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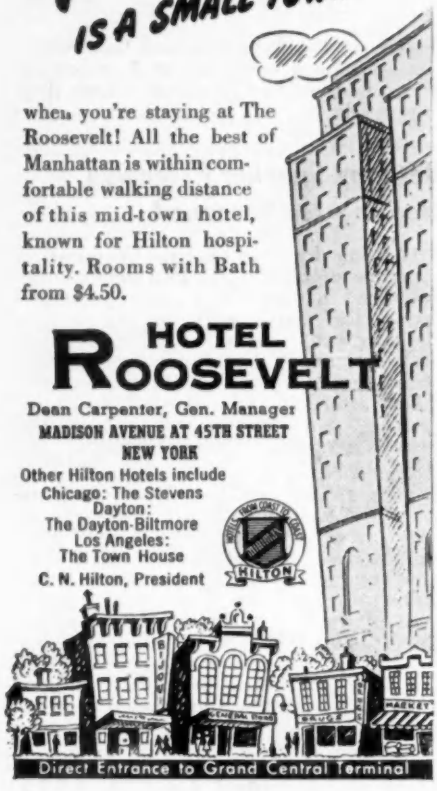

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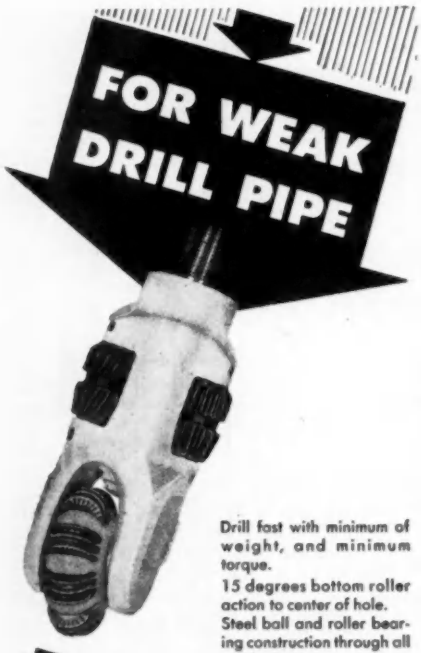

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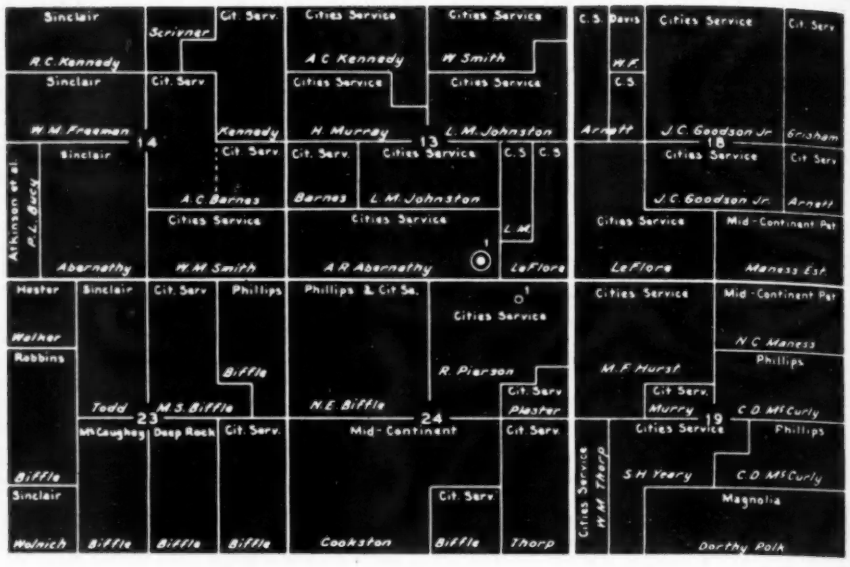
Important Oklahoma Strike



Courtesy Lmehart Oil Reports

One of the year's most important Oklahoma oil discoveries was Cities Service Oil Company's Abernathy 1, SW SW SE 13-3n-2w, which opened the East Antioch field in Garvin County, resulting in an intensive leasing campaign and assuring additional wildcatting in the general area. The discovery well was completed for 750 barrels of oil per day from the Bromide sand at 5595-5502 feet. It is now pumping more than 200 barrels of oil daily.

☆ Kansas

Wildcat South of Studley Swabs 240 Barrels Daily

Wildcat south of Studley swabs 240 barrels of oil daily; Finney, Barber counties report new gas discoveries; test northeast of Ellis community logs saturated Arbuckle lime; Pawnee County wildcat recovers gas, oil-cut mud on drill stem test.

Sheridan County: Continental Oil Company's Hoxie State Bank 1, 2 miles south of Studley pool in NEC 32-8s-26w, which had been showing for a discovery, appears to be an important strike as crews swabbed 240 barrels of pipe line oil in 24 hours after perforating Lansing lime at 3627-62 and again at 3758-73 feet. Initial tests recovered 2080 feet of oil and some water which has been shut off. The well was drilled to 4253 feet in Arbuckle and plugged back to Lansing lime.

Barton County: Harbar Drilling Company's Unruh 1, NE NE NW 24-20s-15w, pool opener 6 miles northeast of Ryan, looms as one of the most important Kansas strikes of the year and may equal the discovery well for the Ryan pool, which flowed 3000 barrels of oil daily from Arbuckle lime. Tests of the Unruh well report it flowing better than 2500 barrels of oil daily without diminishing.

Barber County: Drillers Gas Company's Skinner 1, NW NE 16-13s-14w, 1½ miles east of the Skinner Northwest pool, blew in for 17½ million cubic feet of gas daily to open a new gas area for the county. Topping Maquoketa lime at 4337 feet and with 5-inch pipe set at 4340 feet, the well was deepened to 4344 feet and gas blew out the tools. Shut in pressure is 1525 pounds.

Finney County: A new gas strike was reported 2 miles west of the Nunn pool at The Atlantic Oil Corporation's Wright 1, SE NW NW 33-21s-34w, which tested better than 4 million cubic feet of gas from the Krider sand through casing perforations at 2600-18 feet. The test was drilled to 4915 feet in the Mississippi lime, which failed to produce, and was plugged back to 2688 feet in the Krider.

Ellis County: Darby & Bothwell, Inc.'s Crum 1, NE NW NW 22-11s-20w, northeast of Ellis, was preparing to test an oil show in Arbuckle lime at 3682-85 feet, where good saturation was reported. Casing was set at 3682 feet on top of the show.

Pawnee County: Huber Corporation's Katchelman 1, NEC 34-22s-16w, about 11 miles southwest of the Pawnee Rock pool, recovered 120 feet of oil-cut mud and a showing of gas in a 15-minute drill stem test of Lansing lime from 3668-92 feet and was drilling below 3810 feet. The test is on a Stanolind Oil & Gas Company farmout on a geophysical prospect but little subsurface control. Compared with nearest dry holes, top of Lansing lime appears to be normal.

Nebraska

Fuerst Production Company was pulling pipe to abandon Doersch 1, NW NW SW 6-20n-54w, in the Gering district, Scottsbluff County. Attempts to shut off water in the Lakota were unsuccessful.

Stanolind Buys Interest In Continental Block

Stanolind Oil and Gas Company has purchased 60 percent interest in Continental Oil Company's 9000-acre block of proved and semi-proved gas acreage in the northeast section of the Carthage field, Panola County, Texas. The consideration was approximately $1,600,000 cash.

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U. S. Government Obligations, Direct and Fully Guaranteed	173,180,797.28	Acceptances Account of Customers and Letters of Credit		983,688.68
State, County and Other Public Bonds	21,191,511.32	Dividend Declared, Payable July 2, 1945		84,000.00
Other Bonds and Securities	864,573.32	Accrued Interest, Expenses and Reserves		947,076.87
Loans, Discounts and Acceptances	48,131,625.90	Capital	$2,800,000.00	
Customers' Liability Account of Acceptances and Letters of Credit	670,716.11	Surplus	7,200,000.00	
Stock of Federal Reserve Bank	300,000.00	Undivided Profits	3,365,937.98	
Accrued Income Receivable and Prepaid Expenses	840,043.41	Reserve for Dividend Not Declared	168,000.00	13,533,937.98
Banking House, Furniture and Fixtures	2,772,910.73			
Branch Banking Houses	640,414.43			
Other Real Estate	174,766.65			
TOTAL	$317,900,474.44	TOTAL		$317,900,474.44

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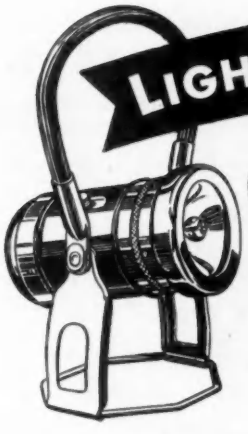

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☆ New Mexico

Ellenburger Discovery Logs 250 Feet of Broken Pay

Ellenburger discovery in Penrose field logs 250 feet of broken pay before entering granite-wash; 1 of trio of wildcats near Hobbs abandoned.

Lea County: N. G. Penrose, Inc.'s Federal-Penrose 1, C SE NW 9-22s-37e, initial deep test for the Penrose field, was drilling dry granite wash at 8268 feet with the granite anticipated shortly. This prospect entered productive Ellenburger at 7950 feet, and the base near the 8200-foot level. Drill-stem tests at intervals yielded flowing high-gravity oil. A test at 8118-80 feet returned gas to surface within 73 minutes. The recovery consisted of 240 feet of oil-cut mud and 120 feet of oil with some rotary fluid. No formation water was found in the Ellenburger. This new zone will likely surpass all others in the state on crude yield per acre, but the extent of the area is speculative.

Gulf Oil Corporation's Pike 1, 1½ miles southwest of nearest production in the Drinkard area, was coring dry lime below 7115 feet after averaging 200 barrels of 37-gravity oil daily on swabbing test after multi-acid treatment at 7105 feet.

Phillips Petroleum Company's Sims 1, C NW SW 24-22s-37e, ½ mile east of the most westerly producer in the Drinkard field, failed to indicate production in the 6300-foot Yeso, but flowed oil from lower pay at 6827-6922 feet. The well will be deepened. The Texas Company's Blinebry 2, northwest offset to the most easterly producer, flowed oil by heads briefly after using 12,000 gallons of acid in open hole at 6881-7368 feet.

Wildcats: Stanolind Oil and Gas Company's Jones 1, 3¼ miles southeast of the Hobbs field, plugged back to the 7900-foot level to set pipe and test Permian shows after reaching granite at 10,578 feet. The Texas Company's Eaves 1, on a strike to the north, was installing heavier rig at 9829 feet. George Livermore et al's Breckon-Texaco 1, an intermediate test, was abandoned at 7745 feet in dry lime.

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☆ West Texas

Southwestern Andrews Has Producer from Devonian

Southwestern Andrews County wildcat produces from Devonian; 4-pay oil strike in general area has logged 319-foot section of broken Ellenburger pay; scheduled Devonian tests for Crane County prospective discovery increased to 8; Pecos County wildcat will test oil show in Devonian.

Andrews County: Magnolia Petroleum Company's and Humble Oil & Refining Company's Cowden 1, C NW SE PSL 7, Block A-55, ⅝ mile northeast of an 8012-foot failure, was drilling at 7958 feet to explore the Ellenburger after confirming commercial production from the Devonian, topped at 7778 feet, with first oil at 7899 feet. A drill-stem test at 7895-7914 feet yielded sweet gas to surface within 52 minutes, and 2100 feet of 40-gravity oil and 60 feet of oil-cut mud. A test at 7893-7932 feet returned 3000 feet of oil and 60 feet of oil-cut mud, and the well headed oil when drill-pipe was pulled.

Shell Oil Company and The Texas Company's Ratliff-Bedford 1, 8¼ miles east by north of the above strike, and the outstanding discovery of the year through having 4 probable oil pays, was drilling at 11,337 feet, or 319 feet in the Ellenburger. A drill-stem test at 11,227-11,319 feet returned gas to surface in 9 minutes and was flowing oil in 50 minutes, with an output of 25½ barrels the last ½ hour of the test. Shutin bottom-hole pressure was calculated at 4900 pounds. This wildcat is 2½ miles northwest of an 11,322-foot granite failure that logged only 120 feet of barren Ellenburger before entering granite, which is the objective of Ratliff-Bedford 1. Followup wells in this area probably will cost between $325,000 and $350,000 to complete in the Ellenburger.

Deep Tests: Humble's Means 88-X, Ellenburger project for the Means field, Andrews County, was drilling at 12,167 feet, having base of Permian at 10,090 feet. The company's Buchanan 1, Midland County prospect, was fishing at 12,505 feet in Ellenburger, topped at 12,170 feet. Four drill-stem tests of this zone were incomplete. In Pecos County, Phillips Petroleum Company's Powell-Powe 1, 2⅔ miles west by north of the Fort Stockton field, was slated to resume drilling at 11,970 feet in unidentified formation. Phillips' McDowell-McDow 1, ¾ mile southwest of a 10,906-foot Ellenburger failure, was making a sec-

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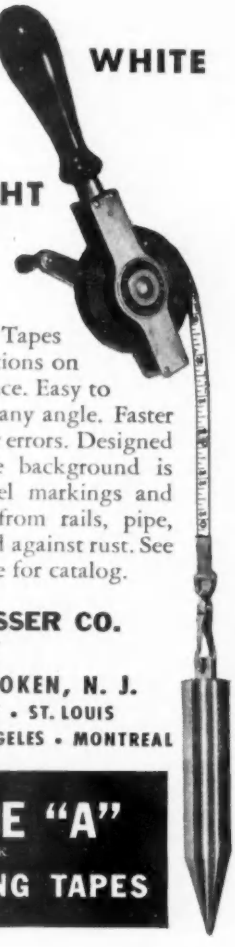

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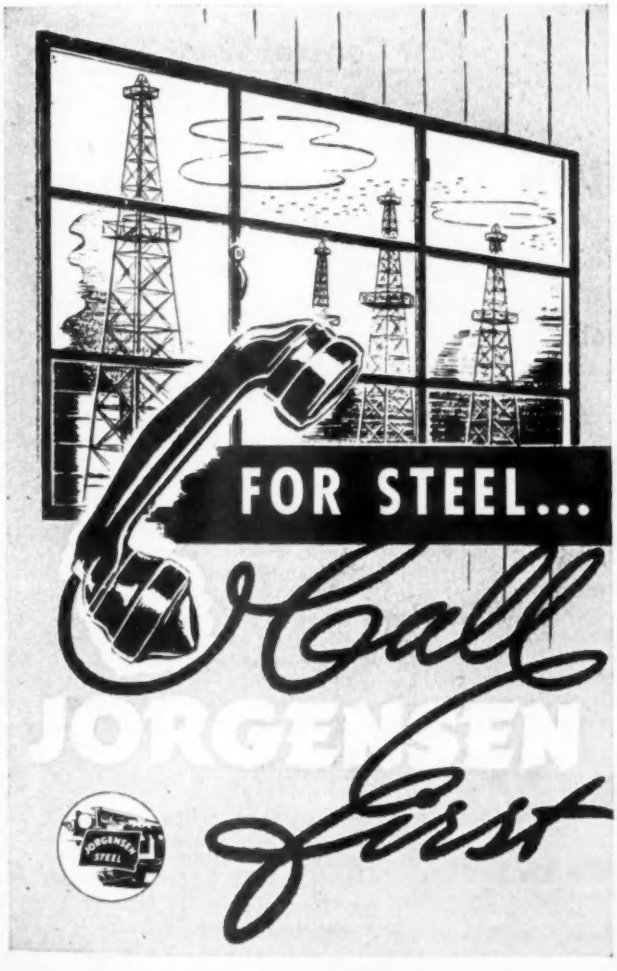

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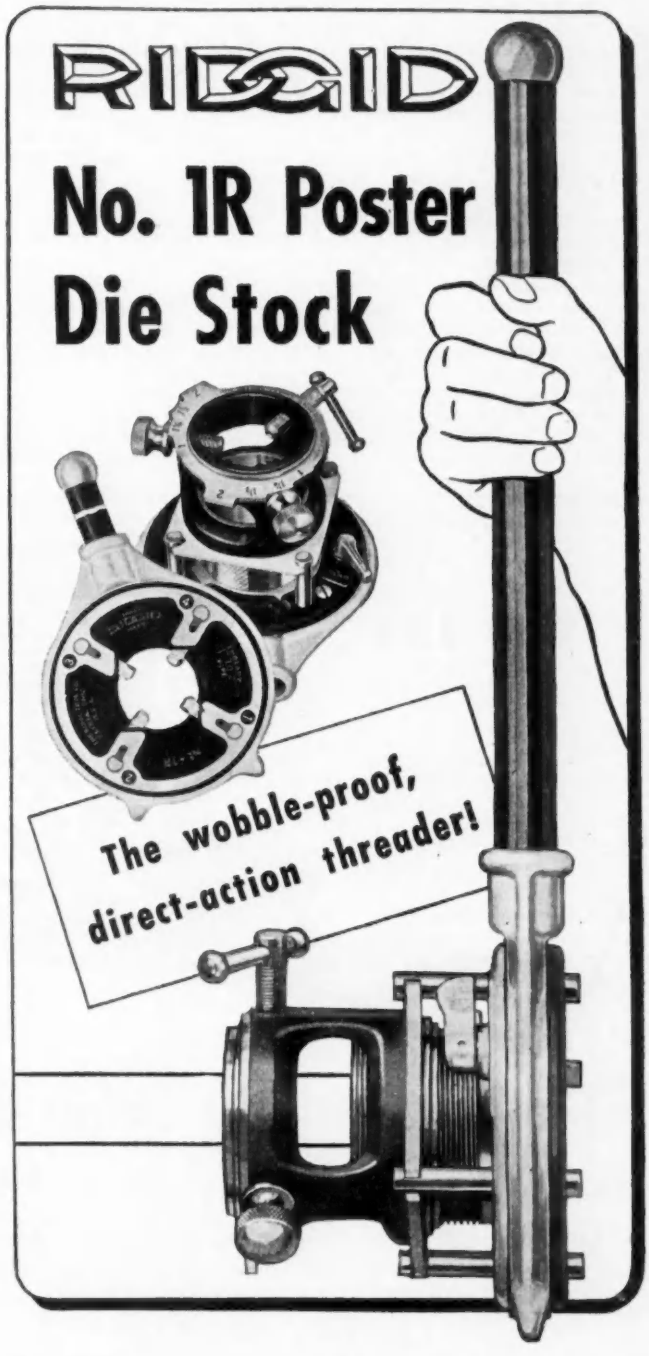

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ond drill-stem test at 10,646 feet in Ellenburger, topped at 10,410 feet, or 86 feet high.

Crane County: The Atlantic Refining Company's University 1-A-31, flowing discovery from record thickness of Devonian, was drilling Montoya lime at 9200 feet. It is credited with possibly 500 feet of effective oil pay in the Devonian. The company has increased to 8 the number of Devonian tests to be drilled on as many 160-acre leases that require production by November, 1946, and more than a dozen outlying tracts will be drilled by the company if these indicate production. The discovery was started January 14. Humble's Cowden 1, 10 miles south by east, was drilling lime and chert at 6570 feet, having had favorable oil and gas show in the Devonian, topped at 6035 feet.

Wildcats: Two prospects were authorized the past week, compared to 1 each the 2 preceding weeks. This curtailment is accompanied by a decrease in purchases of wildcat acreage.

Lamb County: Hunt Oil Company's Foust 1, wildcat and 4¾ miles north of the Anton pool, was abandoned in dolomite at 6304 feet, although originally scheduled to the Ellenburger. Humble's Bagwell 1, 13¾ miles west by north of the Anton pool and an Ellenburger prospect, was drilling lime and shale at 8265 feet. Humble is drilling the pay zone on Leftwich 1 and 1-B, north offsets to its 2 producers in the Anton area, and is starting Campbell 1, a mile south of its discovery.

Winkler County: Stanolind Oil and Gas Company-Shell's Waddell Brothers 1, ¾ mile northwest of the Wheeler-Ellenburger field, was drilling dry Joins section of the Simpson at 10,725 feet, or 159 feet below the Ellenburger top of the nearest producer. Northeast extension for the Ellenburger sector of the Keystone field will be sought by A. R. Dillard et al in purchasing the deep rights under the E½ SW PSL 22, Block 77, from M. J. Bashara & Sons and the Protho Company with the latter being carried for 11/32 over-riding royalty.

Pecos County: Atlantic's Iowa Realty 1, C W¼ of W¼ H&GN Ry. 27, Block 10, is the most important of the numerous wildcats under way in this county through having logged show of oil in top of Devonian and developed fishing job at 6009 feet before test could be made. It is credited with being 435 feet low on base of Permian. The Devonian section was not encountered by J. E. Redmond, Greene and Davis' Iowa Realty 1, 6010-foot Simpson failure 1⅜ miles east. Humble's State National Bank (El Paso) 4, near Ellenburger failures, entered dry Ellenburger at 5220 feet with elevation of 5220 feet, and failed to show production or water on drill-stem tests at 5259 and 5370 feet. It was drilling dolomite at 5480 feet.

Ector County: Phillips' T. P. Land Trust 1-D, southeast offset to the most southerly producer in the TXL field, is the high well for the general area through having entered the Devonian at 7779 feet with elevation of 3268 feet, and was drilling chert at 7850 feet. The company's T. P. Land Trust 1-E, 1⅜ miles southeast, was preparing to sidetrack junk at 6074 feet. Sinclair Prairie's Williamson 1, 2⅜ miles north by west of production, was drilling shale at 9028 feet to explore the Ellenburger.

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☆ Central West Texas

Stephens County Ellenburger Test Registers Small Flow

Stephens County Ellenburger discovery well makes small flow; deep prospect in Fisher County awaiting production test; acid treatment brightens outlook for Ellenburger production in Taylor County.

Stephens County: Sinclair Prairie Oil Company's Tipton 1, northeast corner of Sect. 2960, TE&L Company survey, opened an Ellenburger area in flowing 25 barrels of oil and 11 barrels of water on 2-hour test through choke with 900 pounds flowing pressure on casing and 160 pounds on tubing. Production is from broken saturation at 4056-4164 feet, and the section was treated with 2000 gallons of acid. Ellenburger was entered at 4055 feet.

Fisher County: Sohio Petroleum Company's Newman 1, northwest corner of Lot 6, John Rodman survey and 3¼ miles southeast of Roby, was making production test of saturation at 6170-76 feet in the Ellenburger, topped at 6160 feet with elevation of 1963 feet. Pipe was cemented at 6159 feet without running tester.

Taylor County: Great Lakes Carbon Corporation's Jones 3, William Bishop survey 43, and 3 miles southwest of Abilene, shows promise of making a small well after using 500 gallons of acid after plugging back from water at 4781 feet to 4777 feet. Top of the Ellenburger was called at 4774 feet.

Parker County: Continental Oil Com-

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pany's Dobbs 1, 5 miles southeast of Poolville, was abandoned at 6413 feet in Ellenburger, topped at 6090 feet. Oil-stained dolomite at 6120-50 feet failed to produce when tested after plugging back to 6226 feet.

☆ North Texas

Jack County Wildcat Has Prolific Flow After Acid

Northeastern Jack County wildcat makes prolific flow after acid in Simpson; third flowing well assured for new King County pool.

Jack County: Continental Oil Company's S. F. Borden 1, northwest corner of the E. S. Wilson survey A-1729, 4¼ miles southeast of Newport, flowed 185 barrels of oil on 8-hour gauge through 1-inch choke after using 3000 gallons of acid through perforations at 6720-6860 feet. Production is from Simpson, topped at 6722 feet with elevation of 1123 feet. Borden 1 was drilled to 6927 feet, and tested water from Ellenburger, topped at 6870 feet, or 67 feet high to a 7048-foot failure 1½ miles southeast. It is 6 miles southeast of nearest production, involving a Strawn pumper in Clay County.

King County: The Ohio Oil Company's Ross 3, third producer for the Ross Ranch pool, flowed oil by heads through tester from Strawn lime at 5313-52 feet. Pipe was cemented at 5310 feet.

Clay County: Sussex Oil Company's Walday 1, NE NE NE Sect. 57 and ⅔ mile west extension for the Wood 3-well pool, flowed 71 barrels of oil on 24-hour test through 5/64-inch choke, and later produced 169 barrels of 42-gravity oil in 22 hours. Production is from Bend perforations at 5925-45 feet.

☆ East Texas

LaRue Pool Discovery Offset Yields Salt Water

Second test in LaRue pool yields salt water; Chapel Hill field Smackover project is drilling in Cotton Valley after logging record thickness of 2575 feet of Travis Peak Wood County extension well capped after flowing a maximum of 5000 barrels of 31-gravity oil daily; Harrison County prospective discovery is still testing.

Henderson County: Lone Star Producing Company's Murchison-Wofford 1, northwest offset to its LaRue pool discovery in the Bacon at 8198-8208 feet, tested 7300 feet of salt water with only a trace of oil and gas from perforations at 8212-19 feet. A production test is under way from lower perforations at 8247-53 feet.

Franklin County: Placid Oil Company et al's Ramsey 1-A, Stroud survey and 2 miles southeast of Mount Vernon, was drilling dry Rodessa at 7135 feet after testing dry at 7088-7108 feet.

Leon County: Shell Oil Company and Lone Star Producing Company's Tandy 1, initial deep test for the Buffalo gas field, was drilling hard sand at 10,595 feet in Travis Peak, topped at 10,084 feet.

Smith County: Sinclair Prairie Oil Company's Shofner 1, Travis Peak project for the Chapel Hill field, was drilling sand and shale at 10,928 feet in Cotton Valley, topped between 10,600 and 10,700 feet. The Travis Peak was entered at 8075 feet.

Phillips Petroleum Company's Hairston-Johnson 1, north offset to its South Tyler pool discovery, was filled almost to the surface with cement when oil-string was cemented at 9970 feet, or 14 feet off bottom, and was drilling out cement below 2200 feet.

Wood County: Bobby Manziel et al's Shamburger 1-A, southwest outpost in the Merigale field that flowed wild last week while running tubing. will set liner because of open hole below 4760 feet. Total depth has been corrected to 4874 feet, discounting the possibility of Woodbine sand pay having been included with the regular sub-Clarksville zone.

Nacogdoches County: Magnolia's Harrell 1, William Wray survey and 2½ miles southwest of Waterman, was drilling at 4667 feet after testing 548 feet of gas-cut mud and 1472 feet of salt water at 4372-77 feet in Georgetown, topped near the 4200-foot level.

Harrison County: Rogers Lacy's J. R. Tuttle 1, J. M. Clifton survey, prospective discovery, is still testing. First Travis Peak perforations tested gas and turned to salt water and were squeezed. Pettit perforations at 6465 feet, which were acidized, flowed gas for 1 hour with gradually diminishing volume. The horizon was reperforated around 6480 feet and acidized, afterward flowing 30 barrels of 46-gravity oil with no formation water. The well may be dually completed. Total depth is 7027 feet.

Lacy's Mrs. E. L. Poteet, Betty

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Humphries survey, is drilling below 6214 feet; his B. C. Quinn, Vashti Gibbs survey, is below 4385 feet.

H. T. Manning's G. Vincent 1, R. W. Bedford survey A-69, is drilling below 4010 feet.

D. E. and R. H. Whelan's discovery Peal 1, Betty Humphries survey, has been officially gauged at 52 million cubic feet of gas per day on open flow with a gas-oil ratio of 100,000/1. Production is through 108 perforations from 6776-94 feet in the Dees section of the Rodessa. Total depth is 7862 feet, with 5½-inch casing set at 7743 feet.

Shelby County: Humble Oil & Refining Company is drilling below 9582 feet with no showing in Pickering Lumber Company 1, St. Francois survey, and has made little progress in exceptionally hard formations the past week.

M. E. Davis' Pickering Lumber Company 1, W. J. Brittian survey, is drilling in shale below 6571 feet. Cuttings in the Hill zone around 6100 feet showed oil but no drill-stem test was made.

Marion County: Jefferson Oil & Gasoline Company's J. M. DeWare, Jr., et al 1, Upper Reuben Bennington survey, cored in the Pettit and recovered sand with a slight stain of oil. Coring continues below 6760 feet.

Stewart's Company's Brown Estate 1, Joseph Watkins survey, is drilling below 3645 feet.

☆South Central Texas

Gas Show Registered by Dimmitt County Wildcat

Dimmit County wildcat has gas show; Atascosa well coring in Wilcox; Kerr County deep test tops lime; Edwards County test to start.

Atascosa County: Interest in this area now is focused on Gulf Oil Corporation's Emma Tartt et al 1, Wilcox sand wildcat test 14 miles southwest of the Hobson field. The test was coring in the Wilcox below 6425 feet.

Quintana Petroleum Corporation's C. Muil 1, wildcat in the Martison survey, was coring below 8800 feet for Edwards lime.

Bastrop County: General Crude Oil Company's Addie M. Powell 1, wildcat test 3½ miles northwest of Bastrop, has been abandoned at 3628 feet.

Bexar County: H. A. Pagenkopf's Max Blum 1, deep test in the Gas Ridge field, is drilling below 2000 feet in sandy shale.

Edwards County: T. A. Kirk of Eastland has taken over Dan Auld's Sid Peterson wildcat test 15 miles north of Rock Springs and now is drilling a water well.

Dimmitt County: Humble Oil & Refining Company's S. E. McKnight 1, wildcat 3½ miles southwest of Carrizo Springs, bottoms at 2936 feet and has been conducting drill-stem tests. A test at 2921-33 feet failed when the seat slipped and a test at 2928-36 feet developed a steady blow at the surface with the recovery being 75 feet of gas-cut mud and 1170 feet of salt water.

Kerr County: Phillips Petroleum Company's Whitworth 1, Ellenburger test southwest of Kerrville, is drilling in lime below 6210 feet. Top of lime was 6112 feet.

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☆ Southwest Texas

New Wildcats Are Located; Houston Oil in Staggs Field

Wildcat locations boost activity; Houston Oil Company enters new Webb County pool near Bruni; drilling campaign is planned at South Campana.

Duval County: A 5000-foot wildcat test will be drilled 19 miles north of San Diego by Newman Brothers Drilling Company. It is the Mariano Benevides 1, Dionicio Mindiete survey.

Also in Duval County, Bennett Brothers Drilling Company staked James F. Welder 1, wildcat test, 6 miles northeast of Freer.

Parker and McCune's H. Wid 1, wildcat 5 miles northeast of Hebbronville, has been abandoned at 5012 feet.

Webb County: Houston Oil Company of Texas has entered the Staggs field opened recently in the Bruni area by Tom Graham and Lucey Petroleum Company.

Coastal Refineries, Inc., has located a shallow wildcat test 12 miles south of Mirando City as the Bruni Estate 2 in the Albercas Grant.

McMullen County: Argo Oil Corporation has located 9 new tests on H. C. Edrington Estate 480-acre lease in the South Campana field.

Santa Clara Oil Company's Volney M. Brown et al 1-A, wildcat 12 miles west of Whitsett, is drilling below 5750 feet in sand and shale.

Fred W. Shield has located W. D. Glasscock 1, 7 miles west of Clegg. This is southwest of Magnolia Petroleum Company's Rhodes 1.

Jim Hogg County: Harrison & Daubert gave this area a new wildcat start by staking Guiterrez 1 in the TTRR survey, 14 miles southwest of Hebbronville. Contract depth is 3750 feet.

☆ Lower Texas Coast

Final Completion Started On Willacy County Wildcat

Final completion started on Willacy County wildcat; Victoria activity spurts; Brooks County wildcat testing; offset staked to Live Oak County discovery well.

Willacy County: J. S. Abercrombie Company and Magnolia Petroleum Company are preparing to make final completion at H. H. Dohe 1, wildcat in the La Sal Vieja area near Raymondville. Operators will complete through perforations at 10,000-040 feet in the Frio section where the well first flowed an estimated 125 barrels of 52-gravity condensate daily through ⅛-inch choke. Depth is 10,562 feet with 7-inch casing set at 10,017 feet. Five and one-half inch casing is set on bottom. This wildcat is about 6 miles southeast of a well completed at 7600 feet by Shell Oil Company. The Shell well flowed an estimated 18,000 barrels of oil in 5 months but was abandoned after being drilled deeper. Abercrombie and Magnolia have a second test drilling in the area. Standard Oil Company of Kansas also has a drilling obligation in the area.

Victoria County: Wildcat activity in this county is showing some increase. Production Service Company has made location for a 6000-foot test 8 miles south of the Victoria townsite. It is the Laura Adams 1 in the Allen Talbot survey.

South of Inez, Stewarts et al have staked a 7000-foot wildcat test. It is the Becker 1, Valentin Garcia Grant.

Brooks County: Sun Oil Company's D. J. Sullivan et al 1, wildcat test 8 miles southeast of Falfurrias, is being completed through perforations at 7676-85 feet to open a new gas pool. Depth is 9927 feet with 5½-inch casing set at 9477 feet.

Live Oak County: Ivey & Moran, Houston, has staked a southwest offset to Wright Drilling Company's Mrs. M. A. Hinnant 1, wildcat discovery 11 miles northwest of Mathis. The new test is the William Hinnant 1 in the Alex McDonnald survey.

Jim Wells County: Slick Oil Company is preparing to drill a 5800-foot wildcat test 3 miles south of Alice. The test is the R. R. Mullen 1 in the J. Poitevent survey.

Humble Oil & Refining Company plans a new drilling campaign for the Tijerina field. The company has made 6 new locations on the King Ranch-Jinson 1300-acre lease.

Goliad County: Rowan & Hope's Grace Ryals 1, wildcat 5 miles south of Blanconia, John Shelly survey, is coring below 4380 feet. The Vicksburg is expected around 5250 feet.

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☆ Upper Texas Coast

Wilcox Completion Attempt Made in Austin County Test

Production pipe set in Austin County Wilcox sand wildcat; Columbus outpost sets casing; Village Mills outpost may test in Wilcox; Goodrich pool abandoned.

Austin County: Sinclair Prairie Oil Company's W. A. Schweke 1, James Tylee survey, wildcat 2 miles southeast of New Ulm, was setting 5½-inch casing with total depth of 10,013 feet for a completion attempt in the Wilcox. On a drill-stem test at 9155-68 feet, the well had a slight blow of gas with recovery being 500 feet of 36-gravity oil. Whether additional sands in the Wilcox were cored was not announced. This well is among the few on the west side of the Wilcox trend testing low-gravity oil.

Colorado County: Cities Service Oil Company's John Schobal 1, about 3500 feet east of the C. K. Gay 1 discovery well in the Columbus field, bottoms at 9749 feet and operator is setting 5½-inch casing for completion in the Wilcox. Top of the sand was not announced.

Hardin County: Pan American Production Company's Olive Sternenberg Lumber Company 1, wildcat test about 3 miles northwest of the West Silsbee field, is delayed with a fishing job at 10,039 feet where the well developed a gas pressure.

Houston Oil Company of Texas and American Republics Corporation's Hardin-Fee 3, north of the Cockfield sand discovery well at Village Mills, has 5½-inch casing set on bottom at 9050 feet. Setting of the long string of pipe indicates the operators probably will try for completion in the Wilcox sand. The discovery well logged sand in the Wilcox but completed in the Cockfield.

Harris County: Humble Oil & Refining Company's Milo 10, Wilcox sand test in the Tomball field, is drilling below 10,700 feet in hard shale. This is the first attempt to open Wilcox production in this Cockfield sand pool.

Matagorda County: Stanolind Oil & Gas Company's E. L. Barth 1, outpost in the East Bay City field, is squeezing perforations at 10,436-450 feet.

Brazoria County: General Crude Oil Company's George H. Bingham et al 1, wildcat test 1 mile southwest of Juliff, has been abandoned at 9005 feet.

Polk County: The Goodrich field is being abandoned as depleted. Pan American Production Company, only operator in the field, has asked permission to plug its 3 oil-water Cockfield sand wells. The pool was opened in 1941 with completion of the Texas Long Leaf Lumber Company. Pan American completed 2 other wells on the same tract.

In the Livingston field, Humble Oil & Refining Company is completing its Grandbury 44 in the Wilcox sand after testing gas and condensate in the 4100-foot Cockfield sand. New perforations were made at 6947-77 feet in the Wilcox and the well is flowing 9 barrels of 36.2-gravity oil an hour through a ¼-inch choke.

Madison County: West Production Company and Noranda Oil Company's H. M. Bering 1, Woodbine sand wildcat southwest of Madisonville, is drilling below 2500 feet in sandy shale. A slight show was reported in the Wilcox around 1900 feet.

Factory Planned

Kenworth Motor Truck Corporation plans a new factory at Renton, Washington, which will provide 200,000 square feet of floor area for the manufacture of trucks.

☆ South Louisiana

New Producing Area Opened Near St. Gabriel Field

South St. Gabriel wildcat oiler is flowing; Humble sets casing in St. Mary Parish wildcat; Gulf will test deep Lake Hermitage well; Shell plans outpost at North Cankton.

Iberville Parish: A new producing area is being opened more than a mile south of the St. Gabriel field at Noble and Baker's W. E. Caldwell 1, 52-9s-2e. On initial gauge, the well flowed 264 barrels of fluid daily through a ⅛-inch choke, 11 percent salt water and the remainder 41.7-gravity crude oil. Tubing pressure was 1800 pounds and casing pressure 2700 pounds. A potential was to be run after allowing the well to flow for some time. Total depth was 9305 feet with 7-inch casing set on bottom. Pipe was perforated at 9191-9211 feet for completion. The regular St. Gabriel was discovered in 1941 and has producing sands in the Oligocene at 7750, 8530, 8630, and 9677 feet.

St. Mary Parish: Humble Oil & Refining Company's 1-H Miami Corporation, wildcat in Bayou Cardin, landed 5½-inch casing at 11,849 feet, total depth 11,919 feet. Operator ran an electrical log and side wall samples were taken before pipe was set.

Plaquemines Parish: Gulf Refining Company's Lafourche Basin Levee District 15, 11-18s-25e, deep test in the Lake Hermitage field, bottoms at 11,632 feet and 5½-inch casing has been landed at 11,605 feet.

Lafayette Parish: Shell Oil Company has staked location for F. A. Broussard 1, 65-8s-4e, in an effort to push production of the North Cankton field, St. Landry Parish, eastward into Lafayette Parish.

Calcasieu Parish: Arkansas Fuel Oil Company once again will attempt to open production in the Toomey area. Location has been spotted for its Louisiana State 2 in 33-10s-13w, south of the first test, abandoned at 9514 feet.

Jeff Davis Parish: New Operators have entered the West Tepetate field where Barnsdall Oil Company is the only producer. Itwin and Hudson, Houston, staked Houssiere-Latreille 1 in 36-7s-3w.

Terrebonne Parish: The Atlantic Refining Company will drill an 11,000-foot wildcat test in the Lake Hatch area. It is the Realty Operators, Inc., 2-18s-16e.

Beauregard Parish: Sohio Petroleum Company has completed another oiler in the Mystic field. The Lutcher-Moore B-6 flowed 64 barrels of oil daily through a 9/64-inch choke from perforations at 8470-87 feet. Tubing pressure was 375 pounds.

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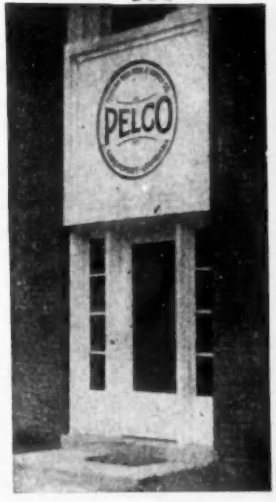

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☆ North Louisiana

Wildcats Report Showings; Richland Well Is Gauged

Three wildcats report showings of oil; official gauge taken at new Richland Parish discovery; drilling activity continues steadily.

Lincoln Parish: The California Company was reported to have logged a show of oil indicating commercial production in the Cotton Valley horizon at M. H. Nobles et al 1, 12-19n-4w, wildcat in the Hico area. Geological information is being withheld as drilling continues below 8000 feet. A later report indicated a showing in the Travis Peak horizon.

California's W. W. Norris 1, 13-18n-1w, Tremont field, logged a gas-distillate pay 9 feet lower than the field's discovery well but in sufficient saturation to insure production. The well is drilling below 9203 feet and will be carried to 10,000 feet before casing is set for completion test.

Ouachita Parish: California also is reported to have had a showing of oil in Rodessa sand in Walter Maxey 1, 32-18n-1e, and to be drilling below 4900 feet.

DeSoto Parish: Tom Palmer's Walter Hill 1, C NW SE 3-10n-13w, wildcat test in the Benson field, ran electrical log at 5560 feet, indicating base of the Massive at 5185 feet and recording a slight kick from the Hill zone at 5243-58 feet. By samples the well topped the Pettit at 6040 feet and was last reported drilling below 6275 feet. A sidewall core in the Hill horizon at 5249 feet recovered some lime with odor of ether and distillate.

G. H. Vaughn's McGrew 1, C SW SW 34-15n-14w, is drilling below 8350 feet in shale still in Travis Peak.

Claiborne Parish: Hunt Oil Company's W. T. Owens 1, 15-23n-7w, wildcat in the East Haynesville area, after cuttings and electrical survey indicated possible oil production from the Gloyd sand and gas production from the Kilpatrick zone, perforated with 40 shots from 4454-64 feet in the Gloyd and tested 98 percent salt water and 2 percent oil. Operators plan to squeeze this set of perforations and retest. Total depth is 5520 feet.

Richland Parish: Southport Petroleum Company has obtained an official gauge at Lola S. Howard 1, C NW NW NW 4-16n-8e, flowing 260 barrels of 40.6-gravity oil per day through ¼-inch choke on tubing. Casing pressure was 775 pounds and tubing pressure 375 pounds. The well was perforated with 60 shots from 2965-75 feet in the Tuscaloosa sand, with total depth being 3433 feet.

Another wildcat failure was reported as Humphrey & Wynn abandoned Valentine 1, C S½ SW NE 12-15n-6e, on the south flank of the Richland Dome. No showings of oil were recorded.

Caddo Parish: Lion Oil Refining Company also abandoned J. M. Wynn 6, C SW NE 9-23n-15w, deep test in the old Rodessa field. Perforated with 500 shots from 6530-6610 feet and acidized with 5000 gallons, the hole swabbed dry. No showings were obtained from reperforations at 6778-85 feet.

Caldwell Parish: Shell Oil Company's deep test in the new Vixen field, Louisiana Central Oil & Gas 2, 36-15n-2e, is drilling below 5472 feet in shale and lime.

West Carroll Parish: F. Kirk Johnson's J. B. McIntosh 1, SE NE 4-22n-10e, is drilling below 954 feet.

Bids on Oklahoma Lands Mineral Rights Rejected

Oklahoma State School Land Commission rejected bids aggregating $11,598 on half the mineral rights on five tracts totaling 610 acres in the booming Garvin County area of Oklahoma, although the commission agreed that the prices, averaging $19 an acre for half the mineral rights were good.

Nine of the 26 tracts which were offered and upon which bids were accepted brought $11,082.43 and covered 1275.85 acres. Stanolind Oil & Gas Company took four tracts near Mutual in Woodward County, acquiring a 50 percent interest from the state. Morgan Oil Company took leases on 320 acres in Kay County for $2 an acre. F. C. Koch of Wichita, Kansas, got two of the eight parcels offered in Beaver County totaling 248.11 acres, for which he paid $2.10 an acre.

Socony's Barinas Wildcat Is Drilling Below 4169 Feet

Socony Vacuum Oil Company reported that drilling had progressed to 4169 feet on July 5 in Silvestre 1 wildcat southeast of Barinas, Apure basin area, southwestern Venezuela.

The site is approximately midway between Barinas and the mouth of the Santo Domingo River. This is the company's second wildcat in the area this year.

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DALLAS, TEXAS

CONDENSED STATEMENT OF CONDITION
AS OF JUNE 30, 1945

RESOURCES

Loans and Discounts	$ 97,877,688.98
Banking House	1,850,000.00
Furniture and Fixtures	245,459.15
Stock in Federal Reserve Bank	450,000.00
U. S. Government Securities	93,725,894.98
Other Bonds and Securities	336,038.37
Cash in Vault and with Banks	78,032,029.14
Total	$272,517,110.62

LIABILITIES

Capital	$ 7,500,000.00	
Surplus	7,500,000.00	15,000,000.00
Undivided Profits		1,200,289.98
Reserve for Taxes, Etc.		1,067,341.03
DEPOSITS:		
Individual	$120,763,188.38	
Banks	77,007,001.29	
U. S. Government	57,479,289.94	255,249,479.61
Total		$272,517,110.62

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☆ Arkansas

Prospective Area Opened North of Graben System

New prospective area opened in Stephens field north of graben; deep wildcat in Columbia County is failure.

Nevada County: J. B. Warmack and W. C. Partee's Lester Realty Company 1, C SE SE NW 36-14s-20w, Stephens field, completed pumping 70 barrels of oil in 24 hours from the Buckrange sand at 2005-08 feet, after plugging back to 2025 feet from total depth of 2348 feet. Production is from open hole. This is the first production in Arkansas from a structure north of the graben system extending across the southwest portion of the state, and which has limited production in the north side of the Stephens field. A new prospective area is uncovered. The only other production north of the fault system is Midway, a distinct structure unrelated to the faulting.

The Stephens field is following a steady development program. Four new locations were staked last week and several wells have cemented casing and are waiting on cable tools to drill in.

Columbia County: McAlester Fuel Oil Company has abandoned C. B. Couch 1, C NW SW 11-16s-20w, deep wildcat test in the McNeil area, at 6795 feet. Perforations were made in both the James lime and Smackover and were acidized, but yielded only formation water. This test is south of the shallow Stephens field.

Union County: R. C. Wallingsford is rigging up for Union Saw Mill 1, C SE NW NW 13-18s-13w, Hillsboro sector. A previous test in the area, Kerlyn Oil Company's Union Saw Mill 1, SE SE SE 20-18s-13w, northeast of the present location, was abandoned. A core from 4045-55 feet recovered a foot of sand bleeding oil, 5 feet of salty sand and gray sandy shale with the bottom 6 inches showing salt water. Total depth was 4350 feet.

H. E. Wasson's Union Saw Mill 1-A, wildcat in C SW SW NE 8-18s-12w, is drilling plug, with 7-inch casing set at 2320 feet. Sand showing oil was reported from 2320-24 feet.

White County: Lion Oil Refining Company's wildcat Nalley 1, SE NE 33-8n-7w, is drilling below 3845 feet.

Ouachita County: O. F. Whitaker abandoned Jack Carnes 1, NE NE NE 34-13s-17w, at 1540 feet.

Rogers Lacy Begins Work On Texas Asphalt Plant

Rogers Lacy, Longview, Texas, oil man, has started construction on a $500,000 asphalt plant at Big Sandy in southwestern Upshur County, Texas.

Located east of the Hawkins low gravity Woodbine sand pool in southeast Wood County, the plant will have a daily processing rate of 3500 barrels, which it will draw from independent producers in the Hawkins pool. Output to the plant will be 1200-1500 barrels daily.

Lacy has recently announced plans for a 20-story Dallas hotel, costing $4,000,000.

7 COMPLETE CATALOGUES IN 1

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☆ Mississippi

Superior Has Extension For Baxterville Field

Superior completes northeast extension for Baxterville field; Eucutta has 69th producer; Brookhaven field again active; Gulf plans to deepen Smith County prospect; dual completion noted for Gwinville test.

Lamar County: The Superior Oil Company's R. Batson 3, NW NW NW 15-1n-16w, has been dually completed to extend the Baxterville field 1½ miles east and ½ mile north. Gas production, which is from the upper reaches of the Tuscaloosa at 7750 feet, was 3,100,000 cubic feet per day through ¼-inch casing choke. Initial oil flow was 264 barrels of 16.8-gravity oil per day through ¼-inch tubing choke with production from 6 series of perforations between 8760-8860 feet. Sun Oil Company's F. M. Snowden 2, SWc SW SE 6-1n-16w, Baxterville field, is drilling below 8650 feet after cores from 8510-8607 feet had shows of oil.

Wayne County: Humble Oil & Refining Company's Masonite Corporation 2, 8-9n-8w, has been successfully completed for the 69th producing well in the Eucutta field. Production is from the Eutaw horizon at 5162-82 feet with well pumping 120 barrels of 24 gravity oil during the first 24 hours. Humble's Masonite 3, NWc 8-9n-8w, same area, is running casing after bottoming at 5213 feet preparatory to early completion. Humble's 3 wildcats in the county are also active. U. S. A. 1, NW SE 23-7n-9w, southwestern corner of the county, is drilling below 5550 feet in chalk with no shows reported; roads have been built to Humble's G. M. & O. D-1, 23-7n-7w, south of Clara, and operation is waiting on derrick; and G. M. & O. E-1, 30-9n-7w, near Boyce, is rigging up.

Scott County: Pan-American Producing Company's School Land 1, C SE SE 16-5n-6e, is coring below 6950 feet in the Marine Tuscaloosa zone with no shows reported. Eutaw was topped at 5750 feet and Tuscaloosa at 6292 feet. Pan-American's U. S. A. 1, NWc 26-5n-6e, is testing at 7252 feet in the lower Tuscaloosa after drill-stem tests at 7199-7212 and 7225-30 feet recovered mud and salt water. Cores at 7305-25 feet recovered 3 feet of sand with questionable shows of oil and gas. The Carter Oil Company's U. S. A.-Clifton 1, SEc 6-7n-7e, is rigging up for a test of the Tuscaloosa horizon.

Lincoln County: Roeser & Pendleton's W. L. Case 1, SEc 8-7n-7e, Brookhaven field, is drilling below 9703 feet. Tuscaloosa horizon was topped at 9398 feet. The Wilcox zone, which lies at 3967 feet was extensively cored with no shows indicated.

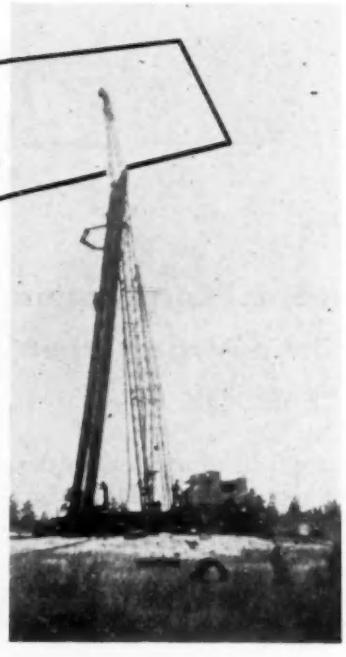
Smith County: Gulf Refining Company's O. P. Foley 1, C SE NW 8-10n-13w, southeastern corner of the county, planned deepening operations after encouraging geophysical exploration. The well was abandoned early in the year at 2269 feet after hitting cap rock, but surveys revealed an overhang with a thickness of more than 1500 feet on that portion of the New Home dome. The well will be drilled to 7500 feet.

Jefferson County: Gulf's Ella M. Cato 2, NWc NE 30-8n-4e, wildcat test, is drilling below 5251 feet with no shows reported. Humble's M. R. Smith 1, SEc 12-9n-1e, which is exploring the deeper horizons after having excellent indications of commercial production further up the hole, is drilling below 11,299 feet after running electrical log to that depth. Last cores having shows were taken at 9680-9722 feet, where gas-condensate sands were recovered. Humble also has made location for Wash Gaines 1, SE 16-9n-1e, which will test the Tuscaloosa horizon.

Clarke County: Kirby Petroleum Company's Long-Bell Petroleum Company B-2, NW NE SE 30-1n-18e, Langsdale field, is setting oil string preparatory to completing at 3765 feet. The field was discovered shortly after the first of the year and now has 9 good producers. Kirby's Long-Bell Petroleum Company C-3, NW NW SE 30-1n-18e, in Langsdale, is installing pump after perforating several sections of the Eutaw zone between 3649-3742 feet.

Jeff Davis County: Humble's J. H. Williams & Sons, 13-7n-18w, is drilling below 7830 feet in chalk with no shows. Superior's Mrs. N. B. Dale "A" 1, NEc SE 29-9n-18w, Gwinville field, has been completed as a gas and condensate well from the Tuscaloosa horizon. On initial production test the well flowed 3 million cubic feet of gas and 38 barrels of 52.4-gravity condensate through ¼-inch tubing choke in 24 hours. Humble's Denkmann Lumber Company 1, C NW SE 27-9n-19w, Gwinville area, has recovered good shows from cores at 8249-58 feet.

WELL DRILLING



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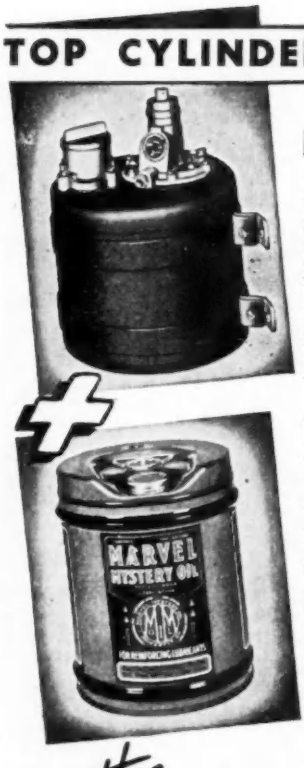

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Alabama

Another failure, with 5 shut down and 1 fishing well, considerably decreased the optimistic activity of the first 6 months in Alabama.

Choctaw County: Hunt Oil Company's Boney-Scruggs 1, C SW NE 32-11n-4w, Gilbertown field, has been successfully completed, with an initial production of 26 barrels of 19-gravity oil and 8 percent water. Total depth was 3572 feet. Hunt's Boney-Scruggs 3, C SE NW 32-11n-4w, is waiting on cement after running 5½-inch casing to 3527 feet.

The Carter Oil Company's wildcat Sam Allman 1, Swc NE SW 5-10n-3w, is drilling below 2475 feet in black shale without shows.

Washington County: J. T. Parks' S. A. Hobson 1, C SW NE 9-8n-2w, was temporarily abandoned at 3185 feet without shows. Eutaw horizon was topped at 2990 feet.

Clarke County: The California Company is reported planning another wildcat on the fee lands of the Scotch Lumber Company, where it abandoned its first wildcat at 5154 feet recently.

Florida

Highlands County: Humble Oil & Refining Company's G. C. Carleton Estate 1, C SW NE 34-38s-29e, recovered only salt water in last drill-stem test at 9864-93 feet and continued to test at 10,194 feet.

Charlotte County: Humble's Lownes-Treadwell 1-A, C SW NE 17-42s-23e, is drilling below 5560 feet and milling junk, with no shows reported.

Collier County: Humble's Gulf Coast Realties 7, C SW NE 17-48s-30e, is drilling below 5800 feet.

Calhoun County: The Pure Oil Company's St. Andrews Bay Properties Company 1, SEc 2-1s-11w, is drilling below 2333 feet without indicated shows.

☆ Rocky Mountain Area

100,000-Acre Block Is Assembled in Colorado

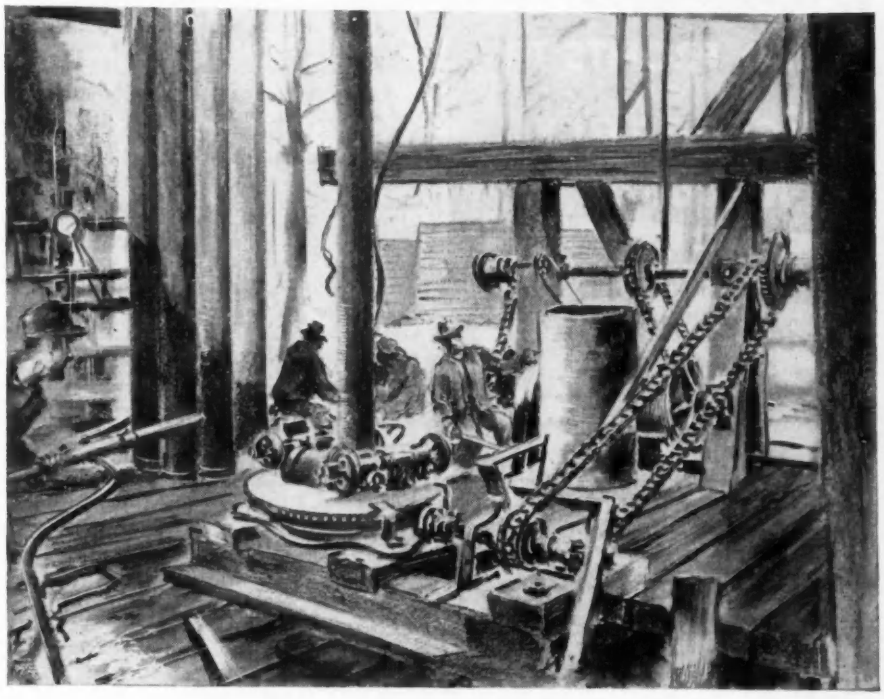
Southeastern Colorado has lease play; Wyoming wildcat shows saturation.

Southeastern Colorado: The extensive lease play in southeastern Colorado was emphasized by the recent joint assembling of a block in excess of 100,000 acres by Frontier Refining Company and the J. M. Huber Corporation, in Townships 27-31 South, Ranges 48-51 West, in northeastern Las Animas, northwestern Baca and southeastern Bent counties.

Considerable acreage has been leased by the majors, as well as independents, during the past year. Among the controlling interests in the area, in addition to Frontier and Huber, are The Texas Company, The Ohio Oil Company, Pacific Western Oil Corporation, The California Company, Skelly Oil Company, The Pure Oil Company, and Union Oil Company of California. The greatest concentration appears to be in Baca, Bent, Kiowa, and Prowers counties, with acreage also being taken in Lincoln, Cheyenne and Las Animas counties.

Union Oil, with Richfield Oil Company, is drilling in new hole in the Kansas City lime below 3600 feet, after setting whipstock at 1364 feet, in its wildcat test on the East May Valley

PIONEERS ★ ★ ★ *from a lithograph*



RIG IN SOUR LAKE FIELD 1905 — *By E. M. Schiwetz*

IN 1905 the Texas oil industry was a lusty youngster fast outgrowing its infant days. During that year it reached a peak that was not to be again achieved until the United States entered World War I in 1917.

About that time two steadying factors began to exert their influence. One was the introduction of scientifically controlled oil production. The other was the influence of sound financing.

Since those early days First National Bank has had a close affiliation with oil people and the oil business. Step by step it has kept pace with their rapid growth through the succeeding decades.

It is natural, then, that the oil man likes to do business here where we can talk his own language and give him friendly understanding counsel and service. We welcome any opportunity to be of service to oil men connected with any phase of the industry.

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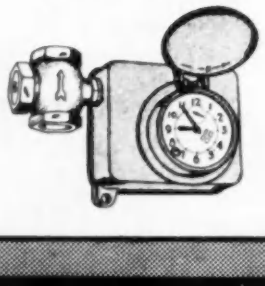

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structure, Prowers County. Skelly Oil Company is spudding Hankins 1 in SE SE NW 34-33s-44w, Baca County. Frontier and Pacific Western Oil Corporation will test Caddoa Creek, Bent County, at SW NW SE 12-26s-50w.

Lamb Anticline: Considerable interest is being shown in Hageman, Pond & Hanlon's deep test of Lamb anticline, on the east side of the Big Horn Basin, Big Horn County, Wyoming. The well, Stanolind 1 in SE SW SE 12-51n-93w, showed saturation in a core taken in the Tensleep, topped at 3440 feet. The well has been drilled to 3449 feet, and preparations are now being made to run casing. A drill-stem test of the Muddy showed gas. The Embar, on a drill-stem test, recovered only drilling mud.

☆ Illinois Basin

White County, Illinois, Has New Producing Area

White County, Illinois, test opens new area with Tar Springs production; Galatin County has new producing area; Edwards County test shows for commercial producer in Diehl sand.

White County: Homer Luttrell's Questell 1, NE NE NW 36-6s-9e, 1½ miles east of the Herald pool, is opening a new area with Tar Springs sand production. When plug was drilled to test pay at 2296-2304 feet, the well swabbed 140 barrels of oil daily. Testing continues.

Galatin County: Frank King and others' Jones 1, NE C 22-7s-9e, 1½ miles south of the Herald pool, flowed 400 barrels in 24 hours to open a new area with Aux Vases sand production. The pay was found at 2899-2912 feet. Operators are still testing.

White County: Skelly Oil Company's Hicks 1, SW SW SW 6-6s-10e, a wildcat test, made 9 barrels of oil and 25 barrels of water in 12 hours after a 60-quart shot in Aux Vases sand at 2966-92 feet.

Edwards County: Fred Noah and Sons' Kershaw 1, NE NW NW 14-3w-10e, a mile from production in the Albion Consolidated pool, is showing for a commercial producer in Diehl sand. During a drill-stem test of pay at 1986-2002 feet, the well made about 500 feet of clean oil and no water in 2 hours.

Coles County: Howard Gordon and others' Litwiller 1, NE NW NE 3-11n-7e, an east offset to a well which extended the Mattoon pool 1½ miles southwest, was preparing to drill plug to test 3 pay zones. Pipe was set at 1934 feet for test of Aux Vases sand, McClosky lime and Cypress sand. Total depth of hole is 2005 feet. The Aux Vases is the principal producing zone in the Mattoon area.

Indiana

Walter Duncan's Weinschein 1, NE NE SW 16-7s-12w, Posey County, 3 miles east of Lamont pool production and 5 miles north of production in the Smith Miles pool of Kentucky, swabbed 75 barrels in 24 hours after plug was drilled to McClosky lime at 2705-10 feet. Operators were still testing.

☆ Michigan

Two Wildcats Show Oil and Third Is Tested for Gas

Two wildcats showing oil and a third is under test for gas; first offset to Rockford discovery dry as Sohio drills 43rd Dundee producer in Coldwater, keeping no-failure record intact for field.

Oceana County: C. W. Teater's Ryan 1, S½ NW NW 16-16n-16w, Crystal Township, south offset to an old wildcat that showed Traverse oil, pumped 126 barrels of oil and 100 barrels of water the first 24 hours under test in Traverse. Formation was logged at 1834 feet and bottomed at 1841 to pump. Teater has a 4000-acre block. Ryan 1 is the 12th wildcat he has drilled.

Clare County: The Pure Oil Company deepened Powell 1, N½ SW NW 7-18n-4w, Hatton outpost, 11 miles east of Freeman field, into water formation at 4260 feet and will plug back and acidize Dundee pay, tested at 4223 feet. Dundee top was checked at 4140 feet. The well swabbed 17 barrels of oil before deepening.

Alpena County: Sohio Petroleum Company's Turtle Lake 1, SE NW NE 9-29n-5e, Ossineke Township, logged big gas pay in Traverse lime at 783-89 feet and shut down for orders.

Isabella County: Sohio competed 3 more Dundee wells to push the field total in 11 months since discovery to 43. No failures in the 1720-acre development have been encountered.

Eastman Opens Office

The Eastman Oil Well Survey Company announces the opening of a field service office at Brockhaven, Mississippi.

☆ California

Lost Hills Test to Drill After Flowing Salt Water

Lost Hills deep test flows hot salt water, but after circulating 107-pound mud prepares to resume drilling; Cymric deep sand discovery well settles down to 500 barrels daily; interest in Los Angeles wildcat perks up when cores reveal streaks of oil sand at 5050 feet; Long Beach deep test passes 13,000 feet.

Kern County: Standard Oil Company of California's deep test of the Lost Hills field, Cahn 58-4 in 4-27-21, was preparing to drill after the well had flowed hot salt water. The well was shut in and crew circulated with 107-pound mud. Total depth is 11,080 feet. Barring unforeseen difficulties the well probably will be drilled another 1000 feet.

Union Oil Company's deep sand discovery in the Cymric field, Anderson 45-26 in 26-29s-21e, which came in for 1100 barrels daily of 33-gravity oil, according to corrected records, was a week later flowing 500 barrels daily. Tubing and casing pressures, which originally were 460 and 550 pounds, recently were gauged at 400 and 685 pounds. Gas production, at first at the rate of 809,000

cubic feet, had been reduced to 504,000 cubic feet. Oil is flowing through a 26/64-inch bean. Thirteen feet of sand is open in the well. Union has rig up for a second well, Anderson 55-26, also in Sect. 26.

J. Paul Getty's semi-wildcat test in the Mountain View area, Derby 23 in 33-30-29, which flowed at the rate of 1000 barrels a day on a formation test from the Chanac-Santa Margarita transition zone, 5450-5540 feet, is again drilling, the operator having decided to drill to basement before placing the well on production. Top of the Santa Margarita was logged at 5565 feet and well is drilling below 6125 feet.

H. H. Magee's Dougherty 3 in 14-30-29, Edison area, which a week ago flowed at a 1300-barrel rate on a formation test of fractured schist material between 2570 and 2626 feet, has been placed on production for 1535 barrels daily of 19.8-gravity oil, 1 percent cut through a 10/64-inch bean with 505/930 pounds and 1 million cubic feet of gas.

Chanslor-Canfield Midway Oil Company was preparing to abandon its Devils Den deep test, Bates 2 in 20-25-29. After almost a year of tough drilling, the drill pipe stuck at 7500 feet while coming out of the hole for the last time. Total depth is 9181 feet.

Los Nietos Producing and Refining Company's test of the South Dome of Kettleman Hills, South Dome 41 in 13-25s-19e, is drilling below 5500 feet in brown shale, far short of the Eocene objective.

Los Angeles County: Interest in Seaboard Oil Company's L. A. Brick 1, near downtown Los Angeles, rose when operator reported coring at 5050 feet in shale with streaks of gray sand and oil sand.

Shell Oil Company's 2 deep tests of the Long Beach field are drilling on. Alamitos 48A has passed 13,000 feet and Stakemiller-Rose 1 is at approximately 12,000 feet.

Standard's deep test of the Santa Fe Springs area, Lewis Community 1 in 11-3s-11w, has completed straightening the hole and is now making new hole below 9750 feet in brown shale. All showings have been of minor character.

General Petroleum Corporation is drilling below 10,830 feet in shale in its closely-watched test of the Buena Park district, Librown 1 in 21-3s-11w.

Santa Barbara County: Bel-Air Oil Company has staked Righetti 3 in the old Casmalia field, 13-9n-35w.

Imperial County: The Texas Company's Holtville wildcat, Grupe-Engebretson 1 in 8-16s-16e, is drilling below 12,200 feet.

☆ Canada

Alberta Plains Wildcat Is Madison Discovery

A Madison Limestone oil and gas discovery is reported at Empire-Pacific 2, lsd 16 22-19-12w4, wildcat south of Princess on the South Alberta Plains. The well is the second on a seismographed Devonian dolomite dome. The first well (Empire-Pacific 1), ¼ mile north of No. 2, was recently completed in the Chert zone overlying the Madison with a yield on pump of 140 barrels daily of 26.7-gravity oil. With Chert and Madison now established as productive, No. 2 will continue to the Devonian, making tests of intervening formations.

Empire-Pacific 2 passed directly from Blairmore into Madison limestone at 3302 feet, missing the chert zone that was productive at No. 1 discovery. Good intergranular and bedding plane porosity showed in cores from 3306 feet. It was halted at 3319 feet, still in porous, and made a 40-minute drill-stem test. The well commenced flowing natural gas at a rate of 2.5 million cubic feet daily, increasing to 2.7 million through a ¼-inch tester, against which bottom hole flowing pressure of 1625 pounds built up. After the test, pipe was found to contain a few gallons of colored distillate, with no evidence of formation water.

Packer is being set just above current bottom in an effort to seal off the bulk of the gas and retest oil prospects. Coring then will be continued further into porous section, testing at intervals, after which well will be carried to Devonian.

Imperial Oil, Ltd., and Anglo Canadian Oil Company have jointly acquired about 200,000 acres of oil and gas rights extending north and east from Calgary, and now are completing seismograph investigation. Shell Oil Company of Canada has taken up 54,141 acres of oil and gas rights east, south and west of Calgary to complete the blocking out of rights surrounding that foothills city. Thirty miles west of Calgary, McColl-Frontenac Oil Company has taken up rights exceeding 33,000 acres along the Ghost River, a dozen miles northwest of the Jumping Pound gas and oil discovery, and now has a seismograph in the field.

STATEMENT OF CONDITION OF THE

FROST NATIONAL BANK

of San Antonio, Texas

to Comptroller of Currency at Close of Business
Saturday, June 30, 1945

RESOURCES

CASH		**$ 27,639,716.09**
U. S. Government Obligations (all carried at par or less)		77,445,296.55
Investment Bonds and Municipal Obligations (all carried at par or less)		2,130,910.00
Stock in Federal Reserve Bank		90,000.00
Loans and Discounts		5,736,374.51
Interest Earned but not Collected		212,672.63
Customers' Liability Account Letters of Credit		188,711.65
Building Account		872,716.66
Other Real Estate Owned		1.00
TOTAL		**$114,316,399.09**

LIABILITIES

Capital Stock		$ 1,200,000.00
Surplus		1,800,000.00
Undivided Profits—Net		701,071.41
Reserved for Undeclared Dividends		96,000.00
Reserved for Taxes, Interest, etc.		261,752.52
Interest and Discount Collected but not Earned		9,858.05
Liability Account Letters of Credit		188,711.65
DEPOSITS:		
Commercial	$58,584,186.12	
Correspondent Banks	19,662,100.11	
Time	16,246,319.19	
Public Funds	8,424,996.61	
United States Government Deposits	6,497,201.45	
Other Deposits, Certified and Cashier's Checks, etc.	644,201.98	110,059,005.46
TOTAL		**$114,316,399.09**

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Form 290—Pipe Line Run Tickets—33 triplicate sets to book, size 4½ x 7½

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EXPLORATORY COMPLETIONS

ALABAMA WILDCATS

Clarke County — Failure: California Co.'s Scotch Lbr. Co. 1, nec 25-10n-1w, abnd 5144 ft.

Washington County—Failure: J. T. Parks' S. A. Hobson 1, c sw ne 9-8n-2w, Selma 1970 ft, Eutaw 2990 ft, temp abnd 3185 ft.

ARKANSAS WILDCATS

Columbia County—Failure: McAlester Fuel Co.'s Couch 1, c nw sw 11-16s-20w, James 3418 ft, Travis Peak 3728 ft, Cotton Valley 4925 ft, Buckner 6525 ft, Smackover 6758 ft, abnd 6795 ft.

Ouachita County—Failure: O. F. Whitaker's Jack Carnes 1, ne ne ne 34-13s-17w, abnd 1540 ft.

CALIFORNIA WILDCATS

Los Angeles County—Failure: Continental's Buehler 1, 14-2s-11w, Turnbull Canyon area, abnd 4156 ft.

Kern County—Failures: Richfield Oil Corp.'s Lerdo 2, 33-28s-27e, Lerdo area, abnd 3607 ft. U. S. Drlg. Co.'s S. P. 33-2, 33-26s-28e, Mt. Poso area, abnd gray sd 1685 ft.

Santa Barbara County—Failure: Whittier Associates' Walter Buell 1, 15-7n-32w, Los Alamos area, abnd 1198 ft.

ILLINOIS WILDCATS

Hamilton County—Failure: Carter's Provident Mutual Life Ins. Co. 1, se sw ne 14-4s-7e, abnd 3547 ft.

Jefferson County—Failure: Ryan Oil Co.'s Young 1, ne se ne 33-1s-4e, abnd 3064 ft.

Madison County—Failure: Duncan & Eason's Rogier 1, sw ne ne, abnd 1850 ft.

Marion County—Failure: Texas Co.'s Ahlf 1, sw sw se 31-3n-1e, abnd 1837 ft.

Richland County—Failure: Kingwood-Sinclair-Wyoming's Volk 1, se ne sw 20-5n-9e, abnd 3214 ft.

Wabash County—Failure: Howard Youree's Newkirk-Marx Comm. 1, ne se nw 36-1n-13w, abnd 2582 ft.

White County—Failures: Ryan Oil Co.'s Stone 1, nw nw se 22-4s-9e, abnd 3400 ft.

Ralph Helbert's Stokes 1, se sw sw 23-4s-10e, abnd 3168 ft.

Washington County — Failure: Magnolia's Hemminghaus 1, sw nw nw 3-3s-3w, abnd 1559 ft.

INDIANA WILDCAT

Posey County—Failure: Mohawk Drlg. Co.'s Hyne 1, nw nw se 9-4s-13w, abnd 3001 ft.

KANSAS WILDCATS

Butler County—Failures: O. J. Connell et al's Butler Co. Farm 1, sw sw ne 6-26s-6e, KC 2125 ft, Miss 2754 ft, abnd 2806 ft.

Ward McGinnis' Leet 1, nw nw ne 27-25s-6e, Miss 2757 ft, abnd 2818 ft.

Ellis County—Failures: Yellow Cab Co.'s Snapp 1-A, nwc 27-11s-16w, Lans 3002 ft, Simp 3332 ft, Arb 3360 ft, abnd 3410 ft.

Virginia Drlg. Co.'s Zimmerman 1, se se nw 36-15s-19w, KC 3292 ft, Arb 3568 ft, abnd 3597 ft.

NORTH LOUISIANA WILDCATS

Madison Parish—Failure: V. S. Parham's Kathan & Johnson 1, 35-18n-10e, Wilcox 1700 ft, Midway 2706 ft, Gas Rock 3075 ft, Igneous 3085-80 ft, Red Beds 3690 ft, abnd 4561 ft.

West Carroll Parish—Failure: Calif. Co.'s Hidge-Hunt Lbr. Co. 1, c sw nw 6-19n-9e, abnd 7039 ft, pb 6711 ft.

MICHIGAN WILDCATS

Allegan County—Failure: W. S. Cook's Clock 1, se se sw 34-2n-12w, abnd 1515 ft.

Gratiot County—Failure: Assoc. Pet. Co.'s Barnhart 1, sw sw nw 5-9n-1w, Dundee 2971 ft, abnd 3005 ft.

Mecosta County—Failure: Gordon and Atha's Holcomb 1, sw nw ne 36-14n-9w, Stray 1340 ft, abnd 1389 ft.

Midland County—Failures: Rex O&G Co.'s Crawford 1, sw sw se 20-15n-2e, Dundee 3652 ft, abnd 3871 ft.

Ashby Dr. Co.'s McCann 1, ne ne ne 33-14n-2e, abnd 4460 ft.

Montcalm County—Failure: Daily Crude Oil Co.'s Peterson 1, n½ ne sw 15-10n-8w, Dundee 3182 ft, abnd 3237 ft.

Muskegon County—Failure: Ohio's Young 1, nw nw se 34-9n-14w, abnd 2372 ft.

Van Buren County — Failure: Harris and Fortney's Pease 1, c ne 9-2s-13w, abnd 1320 ft.

MISSISSIPPI WILDCATS

Jones County—Failure: Gulf's Davis-Grayson 1, swc ne ne 18-9n-13w, Eutaw 6990 ft, Tuscaloosa 7560 ft, Massive 8245 ft, Comanchean 8420 ft, abnd 8662 ft.

Neshoba County—Failure: H. H. Hamilton's Kirkland 1, c ne ne 3-12n-12e, Eutaw 2103 ft, Tuscaloosa 2529 ft, Massive 3290 ft, Comanchean 3422 ft, abnd 4010 ft.

Rankin County—Failure: Love Pet. Co.'s Denkmann Dist. 2, c sw nw 22-7n-4e, Eutaw 5747 ft, Tuscaloosa 6296 ft, abnd 6298 ft.

MISSISSIPPI OUTPOST

Lamar County—Baxterville Extension: Superior's R. Batson 3, nw nw nw 15-1n-16w, 1½ mi e ½ mi n of Baxterville fld, dual comp, perf 200 shots 7768-7802 ft, flow 3,100,000 gas, ¼-in tbg ch; perf 6 sections 8746-8860 ft, flow 264 bbls 16.8-gr, ¼-in tbg ch, tp 175 lbs, td 9035 ft.

MISSISSIPPI NEW PAY TEST

Jasper County — Tuscaloosa Oil Discovery: Southport Pet. Co.'s C. C. McDonald 1, swc ne nw 35-1n-12e, 72 perf 6256-68 ft in Tuscaloosa, flow 180 bbls 29.5-gr, ¼-in tbg ch, tp 150 lbs, cp 178 lbs, td 6616 ft.

NEW MEXICO WILDCAT

Lea County—Failure: Geo. P. Livermore's Breckon-Texaco 1, c nw nw 7-18s-39e, elev 3654 ft, 4⅜ mi ne Hobbs fld, anhy 2060 ft, salt 2170-3240 ft, Yates 3350 ft, lime 4600 ft, abnd 7745 ft.

OKLAHOMA WILDCATS

Garfield County — Failure: Ace Gutowsky's Zaloudek 1, nw sw 21-24n-6w, Miss 5814 ft, 2nd Wx 6657 ft, abnd 6990 ft.

Garvin County—Failure: Texas Co.'s Dean 1, nw nw ne 21-5n-2e, Hogshooter 3290 ft, Bro 5030 ft, 2nd Wx 5115 ft, abnd 5121 ft.

Hughes County—Failure: Schmitt's Barnard 1, ne nw sw 24-8n-8e, Crom 3268 ft, abnd 3410 ft.

Kingfisher County—Failure: Gulf's Triplett 1, ne sw 8-15n-5w, Miss 6976 ft, Hunt 7363 ft, abnd 7692 ft.

Lincoln County—Failure: Midstate Oil Co.'s Kalka 1, sw sw sw 20-13n-5e, Vi 5042 ft, 2nd Wx 5164 ft, abnd 5185 ft.

Murray County—Failure: Ashland's James 1, ne ne se 29-2s-3e, Vi 290 ft, abnd 634 ft.

Oklahoma County — Failure: Vickers Pet. Co.'s Varnum 1, se sw sw 25-14n-1w, Clev 4515 ft, Hunt 5512 ft, Vi 5660 ft, 1st Wx 5760 ft, 2nd Wx 5855 ft, abnd 5875 ft.

Seminole County—Failure: Ashland's Clemmence 1, sw nw sw 21-11n-5e, Hogshooter 2370 ft, Mayes 4305 ft, abnd 4825 ft.

WEST TEXAS WILDCATS

Crane County—Failure: Gulf's Scott 1-A-E 660 nsl 680 ewl PSL 20, blk B-20, elev 2584 ft, anhy 550 ft, Yates 1610 ft, San Andres 290 ft, Ellenburger 7578 ft, abnd 7758 ft.

Reagan County—Failure: Union of Cal.'s Scott 1-D, 1984 snl 1987 ewl T&P Ry. 176, blk 1, elev 2739 ft, anhy 1210 ft, salt 1278 ft, Yates 1680 ft, lime 2490 ft, abnd 3010 ft.

WEST CENTRAL TEXAS WILDCATS

Coleman County—Failure: C. P. Burton et al's Saunders 1, 431 ewl 3050 nsl Jos. Lavin sur 698, blk 6, abnd 3480 ft.

Jones County—Failures: Harry Hines-B. B. Hilburn's Sayles 1, 330 out sec subdvn H. Robt. Smith sur 192, elev 1697 ft, base Sedgwick 1570 ft, Dothan 1639-70 ft, abnd 2440 ft.

Hunt Oil Co.'s Lewis 1, 2500 nsl 1000 we

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FOR SALE

■ FOR SALE: Two Johnson Steam Rigs, with three boilers to each rig, one 16 inch and one 18 inch pump with each rig, about 5,000 feet 4½ inch drill pipe with one rig and none with the other. All of the equipment in A-1 shape, boilers have just been re-flued on each rig 12 x 12 engine for both rigs. These rigs are capable of drilling 6,000 feet and are priced to sell. Also one 5½ inch draw-works unitized and used for power, together with a Lebus clutch, priced to sell. Get in touch with J. B. Daniel, Phone 122, Fairfield, Texas.

■ FOR SALE: Complete rotary rig, Model K Cardwell, 2800 ft. 4½" Drill pipe. All in good condition. May be seen operating. Box 97, Clare, Michigan, Phone 772.

■ FOR SALE: Well drill machines, cable tools, bits, stems, jars, cable, bailers, blocks, elevators, engines, boilers, fishing tools. Write S. W. Pressey, Pueblo, Colo.

■ Double drum Wilson Master pulling machine with 50' telescoping H mast and rotary attachment, on 5-ton International with good 10.00 x 20 tires. Good as new and ready to work. Address: Bill Lynn, 724 West Main, Alice, Texas. Telephone 816J.

■ FOR SALE: 1 Wilson Super Spudder, complete with lines, mast, steel dog house, Kohler light plant, 5" and 6" tools and hand tools. 1 Ft. Worth Jumbo D. Spudder, complete with lines, mast, dog house, Kohler light plant, 5" to 12½" tools and hand tools. 1 Bridgeport, all steel deep well cable tool drilling unit, with 210 H. P. Waukesha drilling engine. The above listed equipment is in A-1 condition. Write O'Brien & Brown Drilling Co., Box 124, Salem, Illinois, or Phone Odin, Illinois, 117R4.

■ LUMBER FOR SALE: Oak, gum and fir timbers. Surveyor stakes. E. J. Gaiennie, Box 1074, Shreveport, La.

FOR SALE

At Silica, Kansas, Warehouse

5 Lee C. Moore steel rig fronts with 11' band wheels.
5 Weber Type AB 13 x 14 roller bearing gas engines.
5 OCS Type FS Non-reversible clutches.
5 Large Happy Idlers.
5 Small Happy Idlers.
6 94' Ideco 330,000 lb. derricks, complete with guy wire and two sheave pumping crown blocks.
6000' 7" O.D. H-40 seamless casing, 24 lb. New.
2500' 7" O.D. Grade C seamless casing, 24 lb. Used.
2200' 6" transite Class 150 New.
200' 8" transite Class 150 New.
560' 10" Century untested.

J. H. TATLOCK
111 South Topeka Ave., Wichita 2, Kansas
Local Phone 4-6336, L.D. 18

■ FOR SALE: Rotary Drilling Rig:
3—110 H.P. Boilers,
250-lb. W.P. Oil Well Engine,
18" Union Tool Pump, almost new,
No. 12 R.B. 25½" National Table,
Boykin R.B. Traveling Block,
Oil Well R. B. Crown,
Ideal Hook 8",
Swivel,
Kelly Joint,
Hose,
Union Tool Draw Works Unitized,
Boiler Feed Pumps,
Generator,
Hot Water Heater,
Lubricators, all in one unit,
8' x 12' Tool House and contents,
Pipe Connection Rack,
3600' 16.60-lb. Pipe full hole joints,
Slips,
Elevators,
Links,
Indicator, all in good condition.
If interested in real bargain, write or phone Ed S. Holmans, Gladewater, Texas.

■ Wilson Giant Workover rig with: Full water circulating brake rings, chain transmission, powered with WAKU Waukesha Engine, 7¾ x 12 Emsco pump, powered with WAKU Waukesha Engine, 25½" API Emsco rotary. New 4 sheave McKissick traveling block, 6000-lb. test Cameron blow-out preventer complete with three sets of rams, 7 x 12 Tool House. All valves and unions 6000-lb. test where necessary. Rig in A-1 condition and complete with hand tools. For servicing wells to 10,000 feet. Available about 10th of August. R. V. West, Office Ph. Ch. 4-5591; Res. Ph. K 3-5318, Houston, Texas.

FOR SALE

■ FOR SALE: 2 Oilwell SC-20 pumping units, 3 casing pumps, 5½ or 7 csg, 6000 ft. ¾ sucker rods. Ellmag Oil Corporation, Luling, Texas, phone 446.

■ FOR SALE: Used "Welderz Frend" acetylene gas generators. I buy and recondition. W. B. Mackey, 6509 Hillsboro St., Houston, Texas. Phone W-7714.

LEASES, DRILLING ACREAGE, ETC.

■ 1000-acre West Central Texas block. Good geology, and subsurface information on shallow and deep wells. Excellent chance for real shallow production in 800 and 1300-foot sands. Well drilled to Ellenburger in 1918 showed for small producer, if acid had been known, chances are that would have made a good well. Will make deal for shallow or deep test. 109-A South 5th Street, Waco, Texas.

■ FOR SALE: 20 acres located in the J. P. Harrison Survey in Montgomery County, State of Texas. If interested write L. E. McCranie, P. O. Box 143, Billings, Montana.

OIL PRODUCER

If you have a property that needs re-reconditioning, or if you have proven or semi-proven leases that need to be drilled on reasonable interest basis, we welcome your inquiries. We are an independent oil producing company, having a complete organization, finances and all necessary power equipment to drill, recondition and operate oil properties. References exchanged. Give full details first letter. All inquiries strictly confidential . . . Address reply to R. P. L. c/o The Oil Weekly, Houston, Texas.

LEASES IN ILLINOIS

We have a most important lease block between producing fields, with excellent geology; Geological report and plats available for lease dealers, independents or individuals interested in leases in real oil development.

Address: Box 68, c/o The Oil Weekly, Houston, Texas

SITUATIONS WANTED

■ Latin America: Married man, 39, with 14 years well rounded experience on earthmoving, construction and oil field transportation in Latin America, mostly in supervisory positions, desires employment. Draft exempt. Fluent Spanish. Know how to handle men. Excellent references. Available on short notice. Address: Box 62, c/o The Oil Weekly, Houston, Texas.

■ COMPETENT landman and title attorney, age 38, desires permanent position with major company or active independent in Oklahoma. Address: Box 69 c/o The Oil Weekly, Houston, Texas.

■ CHIEF DIVISION CLERK, 18 years varied experience in banking, oil accounting, production and drilling, desires position with opportunity of advancement. Either foreign or domestic. Address: Box 71, c/o The Oil Weekly, Houston, Texas.

■ Married man, 18 years experience in contouring, engineering and geological drafting, desires connection with oil company in Texas or Oklahoma. Address: Box 80, c/o The Oil Weekly, Houston, Texas.

SITUATIONS WANTED

■ Geologist, single, 24 4F draft classification, desires position in South America, preferably doing surface work. Approximately one year of sub-surface experience in oil and over one year of surface experience on the Colorado Plateau. Fair knowledge of Spanish. Might consider position in States. Address: Box 70, c/o The Oil Weekly, Houston, Texas.

GEOLOGIST and PETROLEUM ENGINEER

Geologist and petroleum engineer with 20 years experience in Mid-Continent, Illinois Basin, New Mexico, West Texas, and Rocky Mountain districts, now employed as executive in charge of general operations, desires change. Address: Box 81, c/o The Oil Weekly, Houston, Texas.

HELP WANTED

■ WANTED: Driller, experienced on Sullivan hydraulic core drill. Location, Rocky Mountains. Address: Box 35, c/o The Oil Weekly, Houston, Texas.

■ Wanted by a consulting geophysical organization. Petroleum Engineers with Hayward Mud-logging experience or its equivalent. Immediate openings in Venezuela. Excellent opportunity for advancement to managerial positions throughout the world. Address: Box 45, c/o The Oil Weekly, Houston, Texas.

■ Experienced seismograph Party Chiefs and Computers. Expanding company offering very good salaries, working conditions and prospects of advancement. Give full personal data, experience, references. Answers held strictly confidential. Address: Box 63, c/o The Oil Weekly, Houston, Texas.

■ Major oil company wishes to employ two geologists in Houston office for subsurface work in Texas-Louisiana Gulf Coast. Please state education, experience and salary expected in first letter. All inquiries confidential. Our employes know of this advertisement. Address: Box 64, c/o The Oil Weekly, Houston, Texas.

■ REFINERY—Wanted a young married man with knowledge and experience to design, build and operate a small refining plant. Right man can own an interest paying for same out of profits of the plant. Address: Box 72, c/o The Oil Weekly, Houston, Texas.

Wanted, by major oil company, Geological-Map Draftsman for permanent position in Midland, Houston, Wichita Falls, Texas. Give qualifications, experience, references and draft classification. Address: Box 83, c/o The Oil Weekly, Houston, Texas.

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NOTICES

OIL LOANS WANTED

We want good oil loans. We also buy royalties and oil payments.

BAPTIST FOUNDATION
Baptist Bldg., Dallas, Texas

POSITIONS WANTED BY SERVICE MEN

■ In the interest of both employers and employes, **The Oil Weekly,** through its Overseas Pony Edition, which is sent free to 6,500 former oil men now in the services, has offered to run advertisements from those who will be seeking work once they are discharged. In some cases **The Oil Weekly** has a few more details but, generally speaking, direct correspondence would be advisable. Unless otherwise indicated it may be some time before the person named in the advertisement is available.

■ Sergeant awaiting army discharge interested in employment as boiler tender or diesel mechanic, U. S. or South America. Experience as diesel mechanic, automobile mechanic, marine engineering and boilers; age 24, married. S/Sgt. Frazier Gentry Bailey, c/o H. F. Bailey, Route No. 1, College Park, Georgia.

■ Oil field work wanted so can learn trade, prefer roustabout or welding. Some experience in welding; can drive truck up to 5 tons. Married, age 29. Cpl. Francis Clarke, 2082 Qm. Trk. Co., APO 211, c/o Postmaster, N.Y.C.

C. E. DeWitt sur 254, elev 1652 ft, abnd 3341 ft.

Shackelford County—Failure: Hedrick Oil Co.-Jones & Stasney's Nail 2, 330 nsl 2640 ewl E.T. Ry. sect 92, elev 1743 ft, abnd 1696 ft.

SOUTHWEST TEXAS WILDCATS

Duval County—Failure: Republic Nat. Gas Co.'s C. K. Gravis 1, 467 fr n&el 467 fr nwl sur 254, 160-ac lse, abnd 5417 ft.

Jim Hogg County—Failure: Dulup Oil Co.'s San Juan Ramirez et al 2, 660 fr sl 200 fr el blk 10 800-ac lse, sur 271, 660 e of wel 1, Yegua 2513 ft, abnd 2516 ft.

LOWER TEXAS COAST WILDCATS

Dewitt County—Failure: Shell's J. F. Garrett 1, 735 fr sel 500 fr swl 345.8-ac lse, J. R. Foster sur, abnd 8850 ft.

Fayette County—Failure: Clark & Cowden's J. B. Paulus Est. 1, 330 fr n&wl T. H. Harris sur, dr as core hole, abnd 2515 ft.

Jackson County—Failure: Woodie E. Craig's L. R. Hollingsworth 1, 1238 fr swl 2106 fr sel 4430 fr nel 1280-ac lse in Eli Mercer sur, 1238 fr swl 2106 fr sel blk 20, perf 3040-50 ft, flow ssg and cond, abnd 4757 ft.

Lavaca County—Failure: Stewart Boyle's R. Pohler 1, 467 fr el 660 fr sl 70-ac lse, J. Callahan sur, abnd 6511 ft.

Victoria County—Failure: Pool & Johnston's W. R. Handley Est. 1, 330 fr ne&sel 119.2-ac lse, J. Gray sur, abnd 5688 ft.

LOWER TEXAS COAST NEW PAY TESTS

San Patricio County—Maedgen Gas Discovery: Republic Nat. Gas Co.'s G. A. Person 1, 330 fr ne&swl 80-ac lse, J. J. Summers sur, 1800 s of Bridwell's Willmann 1, perf 24 shots 5179-84 ft, flow est 10 min gas open, shut in 5225 ft.

Victoria County—Gaffney Gas Discovery: Arkansas Fuel Oil Co.'s Etta Terrell 2-A, 467 fr el 2120 fr nl at ra 783.97-ac lse, M. Menchaca Gr, Vicksburg pay perf 53 shots 5312-23 ft, flow 11 min gas open, tp 1225 lbs, cp 2200 lbs, td 5653 ft.

UPPER TEXAS COAST WILDCATS

Colorado County—Altair Distillate Discovery: Superior of Calif.'s Mrs. Matilda Tait 2-A, 330 fr sw&sel 500-ac lse, Patrick O'Dangherty sur, 1250 s se A-1 dry hole, elev 221 ft df, Wilcox pay 8256-8316 ft, perf 73 shots 8256-68 ft, flow 432 bbls 57.1-gr oil, no wtr, 16/64-in, gor 3060/1, tp 1900 lbs, td 9286 ft.

Harris County—Failure: Houston Oil Co. of Tex.'s H. D. Taylor et al 1, 466.5 fr nl 2174 fr el 2332.5 fr wl HT&B sur 5, 1359.5-ac lse, Barker area, abnd 8005 ft.

San Jacinto County—Failure: S. A. Brewster-W.O. Bartle's Olive J. Park 1, 1320 fr n&wl Sect 98 330 fr n&el 40-ac tr in nwc sect 98 HT&B sur, sso in cockfield 5290 ft, abnd 9017 ft.

EAST TEXAS BORDER COUNTIES WILDCAT

Panola County—Failure: W. H. Mitchell's Temple Lbr. Co. 1, 3600 fr nwl 1560 fr swl M. Strickland sur, elev 381 ft, abnd 6889 ft.

NORTH TEXAS WILDCATS

Archer County—Failure: J. A. McCarty & Coleman's Turbeville 1, 1924 snl 139 wel blk 177, SA&MG Ry. Sur, A-447, abnd 1520 ft.

Jack County—Failures: L. T. Burns et al's Garrett 2, 2296 nsl 450 wel BBB&C Ry. sur A-100, Bend 4818 ft, abnd 4981 ft.

J. B. Daniel et al's Carney 1, 616 fr m/n/nl 574 fr m/w/el of Isham Farris sur A-220, elev 1216 ft, abnd 3210 ft.

Montague County—Failure: Nu-Enamel Oil Op. Co.'s Agee 1, 330 out nwc blk 21, Kaufman CSL sur, elev 916 ft, granite wash 5050 ft, granite 5370 ft, abnd 5371 ft.

Wichita County — Failure: Frank Wood-Closuit et al's Cabe 1, 200 out nwc blk 270, Waggoner Colony Lands, abnd 2203 ft.

WYOMING WILDCAT

Crook County—Failure: M. D. Miller's Commercial O&G 1, se se se 19-49n-66w, Wakeman Flats, Dakota 2360 ft dry, abnd 2365 ft.

WESTERN CANADA WILDCAT

South Alberta Plains—South Princess Discovery: Pacific Pet.-Princess Pet.'s Empire-Pacific 1, lsd 1 27-19-12w4th, flow 75 bbls by heads, pump 140 bbls 26.7-gr oil, 75,000 gas, fr chert 3281-3322 ft, td.

WILDCAT STARTS

ARKANSAS

Union County: R. C. Wallingsford's Union Saw Mill 1, c se nw nw 13-18s-13w, rur.

CALIFORNIA

Fresno County: Superior Oil Co.'s Sample 81-25, 25-17s-18e, grade.

Union Oil Co.'s Irvine 65-13, 13-13s-12e, rig.

Kern County: Independent Explor. Co.'s Heisen 2, 36-27s-28e, lcn.

Richfield Oil Corp.'s West Mtn. View 53-16, 16-30s-28e, lcn.

Los Angeles County: Logan H. Goodnight's 1, 16-3s-13w, lcn.

Ventura County: C. W. Ginter & Associates' Warring 1, 19-4n-18w, lcn.

ILLIONIS

Clay County: J. L. Block's Daubs 1, ne nw ne 10-3n-8e, dr.

A. J. Hammer et al's Fulk 1, sw se sw 13-5n-7e, lcn.

Cole County: F. D. Walker et al's Sutton 3, sw nw se 36-14n-7e, lcn.

Crawford County: Pete Sutphina's Bailey 1, sw ne ne 28-8n-13e, lcn.

Edwards County: S. L. Diedman et al's Wood 1, ne sw se 6-2s-10e, lcn.

Effingham County: T. Blake Dirickson's Overheck 1, ne ne se 21-8n-7e, lcn.

Franklin County: Bell & Zoller Coal Co.'s Ziegler Coal Co. 5, nw nw nw 25-7s-1e, lcn.

Gallatin County: Tom Ferrell et al's Oldham 1, nw ne nw 24-9s-9e, dr.

Hamilton County: Carter Oil's Provident Mutual 2, nw nw se 14-4s-7e, dr.

Jefferson County: J. A. Lavender et al's Casnero O&G 1, nw nw nw 33-1s-1e, dr.

Shelby County: Pana O&G Co.'s Drain 1, se se se 16-10n-1e, lcn.

Wabash County: Central Pipeline's Mundy 1, sw ne nw 32-1n-13w, lcn.

Washington County: Magnolia's Roesener 1, ne se se 36-2s-4w, dr.

INDIANA

Lake County: Arthur Tonn's Fifield 1, se se se 1-32n-8w, lcn.

Martin County: A. J. Martin's Lents 1, sw sw sw 31-3n-4w, dr.

KANSAS

Barber County: H. A. Hershfield's Jones 1, c sw sw 32-33s-10w, lcn.

Barton County: Lion's Hammeke 1, sw nw 13-19s-12w, lcn.

Republic Nat. Gas Co.'s Essmiller 1, se sw 26-19s-14w, lcn.

Butler County: Zeigler et al's Teeter 1, ne ne se 36-25s-5e, mist.

Greenwood County: E. S. Adkins' Dater 1, se nw 14-24s-8e, dr 1200 ft.

Marion County: Derby & Carey's Robertson 1, sec 35-20s-3e, lcn.

McPherson County: Veeder Supply Co.'s Borth 1, nw sw sw 29-19s-2w, lcn.

Rice County: Ed Swearer et al's Blake 1, se se ne 6-18s-6w, mirt.

Rush County: Skelly's Scheuerman 1, ne ne sw 6-18s-16w, lcn.

Russell County: Lion's Daniels 1, cne sw 21-15s-11w, lcn.

Stafford County: Ed Adair et al's Roberts 1, sec 14-21st-12w, lcn.

Woodson County: Wells & Jensen's McGee 1, sw sw se 25-23s-15e, dr 450 ft.

KENTUCKY

Butler County: J. P. Maier et al's Grubbs 1, 9-J-33, lcn.

Henderson County: Ralph C. Halbert's Cooper 1, 11-P-21, lcn.

Sohio Oil's Rash 1-A, 13-Q-20, lcn.

Clarence Woods' Reichert Est. 1, 17-Q-22, dr.

NORTH LOUISIANA

DeSoto Parish: Chas. C. Lowery's Tanner 1, 13-10n-11w, 3300-ft test.

Natchitoches Parish: E. H. Demitro's Prudential Life Ins. Co. 3, ne se 16-10n-9w, Nacatoch test.

Red River Parish: G. D. Stevens' L. P. Stephens 1, 27-12n-9w, 2000-ft test.

SOUTH LOUISIANA

Calcasieu Parish: Arkansas Fuel Oil Co.'s Louisiana State 1, 3539 e 2421 s of nwc 330-10s-13w, Toomey area, Hackberry test.

Sparta Oil Co.'s Industrial Lbr. Co. 1, 632.5 fr nl 537.5 fr wl nw¼ sw¼ 25-8s-12w, 8500-ft test, ru.

St. Landry Parish: Ralph E. Yates et al's J. G. Meyer 1, start nwc sect 15 go 2325 e th 660 n to lcn in 15-5s-7e, 5000-ft test.

Terrebonne Parish: Atlantic's Realty Operators 1, 1980 s 660 e of nwc 2-18s-16e, 11,000-ft test.

MICHIGAN

Allegan County: S. L. McCall's Erwin 1, nw nw ne 35-3n-14w, lcn.

Michigan Devonian Pet.'s Blauwkamp 1, sw nw sw 18-4n-14w, rig.

Alpena County: Sohio's Turtle Lake 1, se nw ne 9-29n-5e, dr.

Mecosta County: Cities Service's Aaron 1, se ne sw 6-16n-10w, dr.

Osceola County: Gordon and Sohio's Travis 1, se se nw 19-19n-2w, rig.

MISSISSIPPI

Grenada County: J. R. Lockhart's Guy Fite 1, ne 25-22n-6e, 3700-ft test.

Hinds County: Carter's Simmons C-134 1, c se nw 29-4n-3w, 9200-ft test.

Jefferson County: Humble's Wash Gaines 1, nw of sel 1000 ft n of sl of sec 16-9n-1e, rds comp.

Wayne County: Humble's G.M.&O. Ry. D-1, swc 23-7n-7w, lcn.

NEBRASKA

Gage County: Dan Keas' Terry 1, c s½ sw 27-5n-6e, mim.

NEW MEXICO

Lea County: Humble's S. R. Cooper 1, deep test Cooper-Jal field, c nw ne 23-24s-36e, deepen fr 3572-7500-ft Clear Fork.

McKinley County: Richfield Oil Corp.'s Drought-Boothe 1, nw nw se 4-15n-6w, 8000-ft Pennsylvanian test.

Plymouth Oil Co.'s Santa Fe 1-a, c sw nw 13-15n-10w, rur.

Torrance County: Dale Resler et al's Naldo 1, c se se 27-1n-15e, 3500-ft test.

OKLAHOMA

Carter County: R. H. Alexander's Fish 2, se se se 10-1s-2w, rig.

Coal County: Skelly's Mayer 1, se se nw 33-1n-10e, lcn.

Garvin County: Pennington et al's Muer 1, sw sw ne 24-4n-3e, dr 1810 ft.

Seminole County: Gulf's McClung 1, se ne ne 22-8n-5e, lcn.

WEST TEXAS

Gaines County: Condor Pet. Co.'s R. A. Cox 1, c se se PSL 21, Blk A-10, 3⅝ mi s by w Humble's 11,651-ft failure, min for 7500-ft Clear Fork test.

Pecos County: Skelly's C. J. Colden 1, c e¼ of e¼ H&GN Ry. 80, blk 10, 5800-ft Ellenburger test.

LOWER TEXAS COAST

Bee County: Bridwell Oil Co.'s Geo. A. Ray 4, 1385 fr sly/swl 330 fr el 500-ac lse, Anna Burk sur, 4500-ft test.

Brooks County: Sun's Mary M. Lasater 2-B, 1412 fr wl 467 fr m/nly/sl 799-ac lse, 3766 sw well 1, F. Benavides sur 329, 7500-ft test.

Victoria County: Production Service Co.'s Della Hopkins et al 1, 660 fr el 927.8 fr nl 216-ac lse, Allen Talbot sur, 6000-ft test.

UPPER TEXAS COAST

Brazoria County: Glenn H. McCarthy's T. J. McMillan Est. 1, 660 n of sl 111-ac lse or start wly nec lse go w alg nl 1750 th 750 s at ra 1000 se of s end of Little Hog Lake, Geo. Robinson sur, Blue Lake area, lcn.

Harris County: A. T. McDannald-Jack W. Frazier's B. F. Louis 1, 466 fr wl 69.34-ac lse and N. B. Waters sur, 495 fr sl of lse, Almeda area, 8000-ft test.

Liberty County: Shell's J. H. Weaver 1, 467 s of ely/nl 467 w of ely/el 407-ac lse, 467 s&w of sec Shell's V. Horndon lse, Thos. Devers sur, N. Cleveland area, 6000-ft test.

NORTH TEXAS

Archer County: S. F. Hutcheson et al's J. M. Powell 1, 1290 n 150 e of m/s/swc of Wm. Henry sur A-163, 1350-ft test.

Cooke County: W. F. Catlett et al's J. R. Bezner 1, 437 nsl 330 ewl W. W. Martin sur A-692, sw edge Lindsay, 2500-ft test.

Fred Snuggs-A. R. McElreath-Suggett & Neal Bros.' Almon-Sun 1, 330 out nec 49-ac tr, J. M. Randolph sur A-868, 4500-ft Ellenburger test, dr 300 ft.

Haskell County: C. D. Neff & N. V. Duncan's Baker 1, 2200 snl 660 ewl sect 98, C. Winters sur A-430, 5500-ft test.

Manning & Brown's F. A. Adair 1, nw nw nw H&TC Ry. 7, blk 3, 3250-ft Palo Pinto test.

Throckmorton County: Lion's Frank Daws 1, 1400 out swc sec 1694, TE&L Co. Sur, 5000-ft Ellenburger test.

Wichita County: Akin-Dimock et al's W. B. Honaker 1-A, 550 snl 200 ewl of 160-ac tr, Jas. Cole sur A-37, 2000-ft test, dr 625 ft.

Bridwell's J. S. Bridwell 4, 3350 nsl 650 ewl sect 11, AB&M Sur A-339, rur for 2000-ft test.

D. D. Feldman's Feldman-Nance 1, 400 out swc H&TC Ry. 15, blk 7, 2200-ft test.

WESTERN CANADA

South Alberta Plains—Chin Coulee: Imperial Oil Ltd.'s Chin 2, sw lsd 4 15-9-18w4th, lcn.

West Taber: Commonwealth Pet. Ltd's Commonwealth-Taber 1, nw lsd 11 22-9-17 w4th, lcn.

SQUEAKS from the BULL WHEEL

Philosogrin

A doctor fell into a well,
And broke his collarbone;
A doctor should attend the sick
And leave the well alone.

—The Pelican

"... and I think I might say without fear of contradiction ..."

Saints Rest His Soul

"Faith and it was terrible," said Mike. "There was 227 Englishmen and an Irishman killed in the wreck."

"Indade!" exclaimed Pat. "The poor, poor man!"

Proof Through the Night

"Halt! Who goes there?"

"American."

"Advance and recite the second verse of the 'Star Spangled Banner.'"

"Don't know it."

"Proceed, American."

Poet's Nook

Here's to the gal with the turned up nose,
Well-turned figure and turned-down hose.

With the turned-on charm and the turned-down light
I'm going to marry her if things turn out right.

Encore

At fifty per Drove Henry Sidd.
He thought he wouldn't skid—but did.

No Wasted Effort

In Scotland a doctor who was conducting an ambulance class asked one of his pupils what he would do if he came across a man lying unconcious by the roadside.

"Gi' him a glass of whiskey."

"But if he couldn't swallow a glass of whiskey, what then?"

"I wouldna bother wi' him any mair. If a mon's a Scot and canna swallow a glass o' whiskey—he's deid."

This Curious World

When a man speaks he is trying to be logical. When a woman speaks she is trying to be irresistible.

A good dancer is like a telephone operator—every line busy.

A hick town is one where there is no place to go that you shouldn't.

Classified ad: Wanted—a lady secretary, five feet, two inches tall, blonde, beautiful, fine figure. Bring a friend.

Puzzle Solved

"Young man, just why are you bringing my daughter home at six in the morning?"

"'Cause I'm due at work at seven."

Spare Her the Grief

For several hours the expectant father tramped the maternity ward corridor. When at last the nurse brought him the news that it was a girl, he sank into a chair and mopped his brow.

"Thank God, it's a girl. I'd never want a son of mine to go through with what I have today."

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Consulting Geophysicists
Specializing in Magnetic Surveys
Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique
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Analysis of oil field brines, cores, gas, oil and minerals. Field gas testing. R. H. Fash, Vice President; Long Distance 138
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SINGLE SEAL SEAT — SEATS and BALLS — DOUBLE SEAL SEAT
- Available in a grade to meet the individual well pumping problem.
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- Insure more fluid lift economy.

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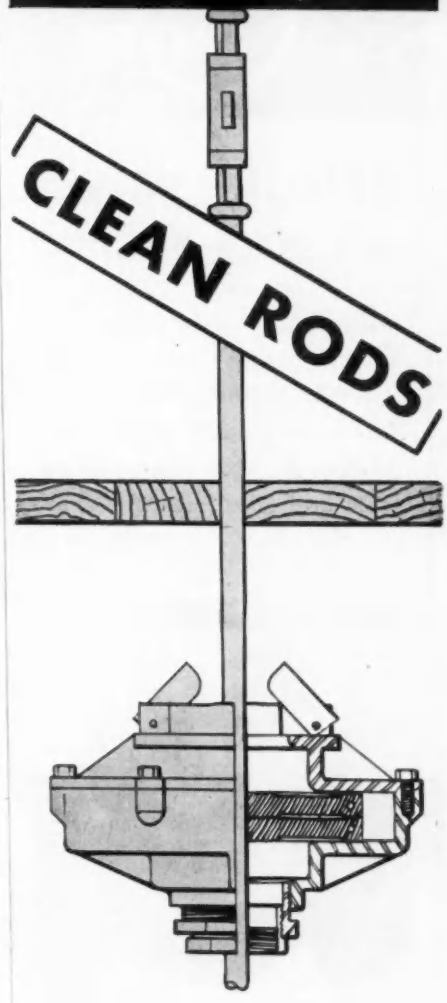
Analytical and Consulting Chemist
Podbielniak Gas Analysis
Oil Field Brines, Waters and Cores
Complete Evaluation of Crude Oils
Long Distance 267, Box 132, Houston, Tex.

"Best Bet Yet"



UNIVERSAL TYPE SUCKER ROD WIPER

Designed for all sizes of rods. Cast steel body—Plain or safety cover. Adapted to fit pipe from 2" to 3" reinforced.

Replaceable double seal discs, made from oil resistant PBX synthetic rubber, Patterson-Ballagh's new development.

See Composite Catalog

Patterson-Ballagh SUCKER ROD WIPER
Los Angeles 1 Houston 10 New York 6

ORBIT VALVES

DRILLING VALVES ARE QUICK OPENING

Only 2½ to 5 turns are required to fully open or close the ORBIT DRILLING VALVE. The seats are protected against damage from drilling tools and wire lines.

Orbit Flanged End Drilling Valve

Orbit Drilling Valves are available in both full opening and nominal opening sizes. With flanged or screwed ends.

See 1944 Composite Catalog Pages 2193 to 2212

SERVICE REPRESENTATIVES
R. G. "Bob" Cole, Houston, Texas
Phone Fairfax 0057
Warehouse 407 Velasco Street
Houston

Rex E. Galloup, Phone 6436,
Lubbock, Texas

ORBIT VALVE COMPANY
TULSA, OKLAHOMA

MEN IN THE INDUSTRY NEWS

C. Frank Redick, superintendent of production for The Ohio Oil Company in the Yates field, West Texas, will retire August 1 after 32 years of continuous service. He began as a machinist of the company at Bridgeport, Illinois, and worked in Wyoming and Kansas prior to his transfer to Texas in 1928. **Frank Bascom,** superintendent of the Hobbs, New Mexico, district, will succeed Redick.

M. W. Bowen, Central European division manager in foreign trade department of Socony-Vacuum Oil Company, has been appointed to the new Middle East Committee of the National Foreign Trade Council. The committee was created to analyze Middle East commercial conditions and to recommend United States trade policies to be pursued there.

John W. Crutchfield, formerly senior petroleum engineer for Humble Oil & Refining Company in the Southwest Texas Division, has resigned to do consulting petroleum engineering work, with offices in the Nixon Building, Corpus Christi, Texas.

Charles V. Shannon, who recently resigned as general counsel of FPC, has become a member of the Washington firm of Wheat, May and Shannon, attorneys.

Joe K. Steele has been named assistant director of supply and transportation, District 5, Steele joined PAW in February, 1942, as assistant marketing analyst. In March, 1945, he was made acting associate director of supply and transportation, District 5. He served in that capacity until his recent appointment as assistant director.

H. Travis Brown, formerly assistant division geologist for Cities Service Oil Company at Oklahoma City, has been transferred to Bartlesville as division geologist in charge of development work. Brown has been with Cities Service for 15 years, most of which have been spent in the Oklahoma City area.

Dr. Victor E. Monnett, director of the school of geology, University of Oklahoma, spoke before the Oklahoma City Geological Society on the work of the Oklahoma Research Institute and the part it is taking in aiding the petroleum industry in Oklahoma and the Southwest.

G. E. Mosier, appraisal engineer and assistant office manager, oil production division, Cities Service Oil Company, Bartlesville, Oklahoma, has resigned after more than 20 years with the company to resume consulting work.

H. E. Summerford has resigned as geologist for Shell Oil Company at Oklahoma City to engage in private consulting work and as an independent operator.

Walter Wittlinger has been transferred from Wichita, Kansas, to Bartlesville, Oklahoma, as assistant superintendent of Cities Service Oil Company's land and lease department.

James H. Graham, Tulsa, has been named director of PAW's natural gas and natural gasoline division in the Southwest. He had been assistant director of the division since June, 1944.

W. G. Skelly, president of Skelly Oil Company, Tulsa, was elected president of the Tulsa Oilers baseball club, which has a franchise in the Texas League and expects to resume play next year.

Joseph Ward, district geologist for Mid-Continent Petroleum Corporation, has been transferred to Shreveport to head a new geological department.

Lewis A. Ellis and **Rex Ryan** have been appointed head of the land department and district geologist, respectively, for Ashland Oil & Refining Company's new district office at Shreveport. Both were transferred from Jackson, Mississippi.

Dan W. McCauley, head of British-American Oil Producing Company's land and geologist department at Shreveport, has been transferred to Houston.

Charles E. Foster, vice president of Cities Service Oil Company, has retired after 43 years with the organization and is succeeded by **Joseph A. Kelsey,** sales manager of the Pennsylvania company, who has been elected a director and vice president in charge of domestic sales.

F. M. Butler, superintendent of the industrial relations department, Cities Service Oil Company, has been appointed an industry member of the Eighth Regional War Labor Board. He had previously served as an industry panel member.

Verne V. McGrew has joined Southwell Supply Company, Houston, as salesman in the Mid-Continent area. McGrew entered the supply business in 1913 with Oilwell Supply Company at Lawrenceville, Illinois. He joined Frick and Lindsay Company in 1917, transferred to Frick-Reid, now Jones and Laughlin, in 1919, and for the past 25 years has served this company.

Verne V. McGrew

Earle R. Atkins has been named California representative for Rector Well Equipment Company, Fort Worth and Houston.

Atkins has offices in the W. W. Wilson Building, Huntington Park, California. Among the products manufactured by the company are the Rector Well Heads and Rectorseal.

Earle R. Atkins

E. J. Handley, formerly geophysicist for British-American Oil Producing Company at Tulsa, Oklahoma, is now geophysical supervisor for Shell Oil Company at Tulsa.

Frank E. Richardson and **Hugh W. Baird,** pipe line engineers and constructors, have withdrawn from the firm of Foreman-Richardson-Baird, at Kansas City.

F. T. Fendley, purchasing agent of the Humble Oil & Refining Company, has been named chairman of the purchasing agents division of the Harris County War Chest's fall campaign.

John Parker, landman for Kingwood Oil Company, Evansville, Indiana, has been transferred to Jackson, Mississippi, to open a new district.

Don Canfield, Sinclair Prairie Oil Company scout on the Upper Texas Coast, has been transferred to Tyler as East Texas scout. **Ray Gilley** was transferred from Tyler to Houston as scout

M. F. Lawless made a stopover in Houston last week, en route to drill Phillips Petroleum Company's first Venezuelan well. Headquarters will be at Caracas.

Harry A. Feldbush, formerly works manager of the Holyoke, Massachusetts, plant of Worthington Pump and Machinery Corporation, has been named vice president in charge of engineering for the entire corporation, with headquarters at the general offices in Harrison, New Jersey. **Ralph M. Watson,** formerly chief engineer of the centrifugal engineering division, has been appointed assistant to Feldbush.

Walter F. Munford has been named assistant vice president of American Steel & Wire Company, subsidiary of U. S. Steel Corporation. **George A. Gleason** has been made manager of operations of the Worcester, Massachusetts.

Deaths

Karl Howard Schilling, research geologist for Shell Oil Company in Houston, died July 17. Schilling, 51, had been with Shell for 25 years and had worked in South America.

William P. Durkee, vice president of Van Fleet-Durkee, Inc., died at his home on Balboa Island, California, July 16. Durkee, 48, served at various times as manager of the marketing department of General Petroleum Corporation in Washington, Oregon and northern California; vice president of Shell Union Oil Company of New York, and vice president of Shell Oil Company of California. Two brothers, **James T.** and **Rodney S. Durkee,** are in the oil and oil equipment business in Los Angeles.

Major Kenneth Sauer, former oil editor for the Wichita Eagle, Wichita, Kansas, died December 15 when a Japanese prison ship sank off the Philippines, Sauer was on the staff of **Gen. Jonathan Wainwright** and was taken prisoner at Corregidor.

Merrill N. Phillips, general superintendent for British American Oil Company in California, died July 17 in East Whittier, California. Phillips, 45, was associated with the petroleum industry for 25 years. He was a graduate of Stanford University.

E. R. Hutchison, an executive of Arthur A. Cameron Oil Company, Evansville, Indiana, died in Evansville July 22. Hutchison, 35, was a native of Tulsa, and had been an attorney for The Carter Oil Company before going to Evansville.

Henry Birdsall Masterson, 47, Houston independent oil operator, died July 20.

Lester Boner died July 18 in Tulsa after a long illness. Boner, 68, had been an employe of The Pure Oil Company for 36 years and had resided in Tulsa two years.

Fred L. Penuel, independent oil operator, died July 18 in Tulsa. Penuel, 68, had resided in Tulsa since 1900 and was a native of Graby, Missouri.

Mister, Here's a Flashlight that's JUSTRITE

The New Handy-Safety FLASHLIGHT

Here's a 3-cell Flashlight that fits an oil man like a ten gallon hat. There's 1500 candlepower at the flick of a switch ... designed to make standard dry cells last almost twice as long because they're hooked up to a .3 ampere high efficiency, low drain bulb. The rugged plastic case "seals-in" all the famous Justrite Safety Features. And handy! Say ... it fits the palm of the hand, on belt clip, finger ring, stands alone on its own base, fits the pocket and last, but not least, the pocketbook.

Not only that, it's safety approved for use in methane gas and air mixtures and for safe use in pump rooms of tankers. These approvals are by the U. S. Bureau of Mines, Bureau of Marine Inspection and Underwriters' Laboratories., Inc. (Class 1 Group D Locations).

Model 17-S

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BEAUMONT
WELL WORKS COMPANY
INCORPORATED
BEAUMONT, TEXAS

PAGES 3079 THRU 3098 IN THE COMPOSITE CATALOG

Training of Supervisors

As industry moves into the complicated period of operational and managerial problems that will extend into the postwar era, the role of the supervisor is one of increasing importance. The supervisor, or middle-man, in industry is the individual to whom management looks for execution of its plans; he is also the man to whom the worker looks for fair play in all the phases of industrial production which affect him. In addition to being both a manager and a worker, the supervisor must be an instructor.

George H. Fern, director of the Michigan State Board of Control for Vocational Education; state director of the War Production Board Training and Food Production War Training; and vice president of industrial education, American Vocational Association, has recognized the part instruction plays in the supervisor's job. Fern's new book, "Training for Supervision in Industry," is concerned primarily with the responsibilities of the supervisor as an instructor.

Before he can instruct, he must be given his own instructions and must understand how he and his men "fit into the picture." He must participate in the conferences of top management which affect him and his department. He must know how to give instructions. He may have to know how to train others to train men.

Over a period of years the author has conducted supervisory training conferences for foremen and supervisors and has administered such training programs. The need has been for an understandable handbook on supervisory training that would serve as a guide in these conferences; a book (1) that would be a simple manual to direct the supervisor in his own self-improvement and upgrading; (2) that would help the beginner, or the prospective supervisor, to understand his own job and how he could improve as a supervisor; (3) that would assist conference leaders responsible for conducting conferences or training programs for supervisors.

The new book is an attempt to meet this need. It is not concerned with the history or the development of the supervisory function in industry or with the technical and economic phases of supervision. Rather, it is intended to give direct help to the supervisor with the problems of his daily job, especially, in the field of human relations and training.

McGraw-Hill Book Company, 330 West 42nd. Street, New York 18, New York, publishes the book. The price is $2.

Electronics

Allis-Chalmers Manufacturing Company, Milwaukee 1, Wisconsin, has published bulletin E6358, "Introduction to Electronics," to provide an understanding of the principles of electronics and give an idea of the part electronics will play in future industrial development. The bulletin was prepared by Dr. Walther Richter, one of the outstanding engineers in the new electrical field.

A brief discussion on the fundamentals of conversion and control of electric power in a load prefaces introduction of the subject of electron tubes. Approaching this subject as a guide for application engineers, instead of tube designers, the book explains that the electron tube is a new control element which is nothing but a special type of rheostat or switch.

Differences between a vacuum tube and the equivalent mechanical device, methods of specifying tube performance, application of tube characteristics for design purposes, and use of the high speed response of the tube are explained. Clearly presented are principles of tube detector action with applications, and principles of tube oscillators with application to induction and dielectric heating.

Basic Inventions

Allis-Chalmers, Milwaukee, Wisconsin, has published bulletin R-6366, "Basic U. S. Inventions," to emphasize that inventions are protected by the United States patent system are a definite part of the foundation of American progress and prosperity.

Information in the booklet is reprinted from the Allis-Chalmers Electrical Review and covers 19 basic inventions as follows: Food and Clothing; Whitney's Cotton Gin; McCormick's Harvester; Howe's Sewing Machine; Fulton's Steamboat; Westinghouse's Air Brake; Wright Brothers' Airplane; Goodyear's Vulcanized Rubber; Burton's Oil Cracking; Morse's Telegraph; Bell's Telephone; De Forest's Amplifying Tube; Shole's Typewriter; Mergenthalers Linotype; Edison's Incandescent Lamp; Telsa's Induction Motor; Edison's Phonograph; Edison's Motion Picture Projector; Hall's Reduction of Aluminum; Baekeland's "Bakelite."

Petroleum Research

Socony-Vacuum Oil Company, 26 Broadway, New York, has recently published the story of Socony-Vacuum research and product development in a booklet titled "848 Men—And You." The publication gives facts about current research and product development in Socony-Vacuum's laboratories. These facts and developments are projected into the future by their applications and adaptations to peacetime industry. The booklet is exceptionally well written and illustrated and gives short explanations of the many items being developed and studied.

The theme of the booklet is well expressed in the concluding paragraphs: "This book," it is noted, "is only one chapter of a serial story . . . one fleeting glimpse of a never-ending motion picture.

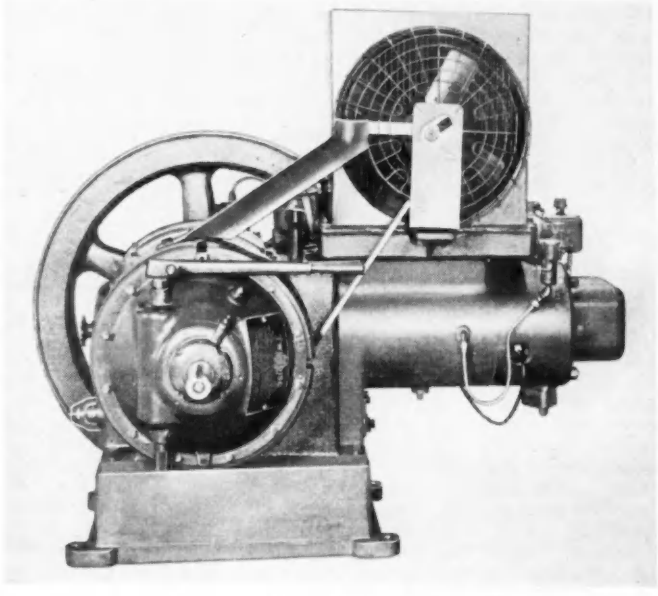
"The great petroleum accomplishments reported here—the new gasolines, motor oils, industrial lubricants and other products—all of these are just foundations for things to come.

"Building upon them, the General Laboratories already have started the structure of far greater, far more significant developments."

1—Pumping Engine

Continental Supply Company, Dallas, announces a new pumping engine, Continental CSCO-66, the first in the series of this type.

Built by The Climax Engineering Company, under the supervision of Continental engineers, the engine is said to have a number of outstanding features: It has a rated horsepower of 13.2 at 680 revolutions per minute with a 5¾-inch bore and 7½-inch stroke. A big crankshaft with big bearings give rigid operation, and a removable wet cylinder sleeve eliminates reboring. Improvements include full pressure lubrication; twin-disc take-off, a time saver since special sheaves or clutches are thus eliminated; a fully enclosed, positively operated and lubricated valve mechanism; oil damped governor; and gas-gasoline fuel system with a mechanically operated fuel pump.



Other salient features which make this engine especially adaptable to pumping problems in the oil industry are as follows: Oil filler cap which enables oil to be added while the engine is running; a safety water level gauge which shows the operating level of water; an instantaneous governor adjustment; an oil pressure indicator which cannot fail or wear out; accessible, positive compression release that makes for easy starting; roller or anti-friction clutch shaft bearing; visible oil level; six ⅜-inch cap screws which allow removal of the top cover without disturbing other parts, and without the use of a socket wrench; wrenchless access to the crankcase, allowing the far corners of the case to be reached through the opening; easily exposed valves by removing one nut; an oil drain which thoroughly drains the case; exhaust pipe flange; accessibility of the oil strainer which can be removed from outside of the case; large water filler opening; valve-in-head removable cylinder head; removable wet cylinder sleeve.

Shipping weight of the engine is 1600 pounds. It is available in all branches of Continental Supply Company.

2—Electrode

Harnischfeger Corporation, Milwaukee, Wisconsin, has developed a new welding electrode known as Type P&H "Hardcast," an all-position mild steel electrode for welding and repairing cast iron. It is said that the deposited metal will have a tensile strength of approximately twice that of a good grade of cast iron.

The electrode can be used at low amperages, thus minimizing the dilution effect at the fusion zone. It fuses well with mild or medium carbon steel, making it suited for joining cast iron with other types of steel. Sound, dense welds are easily obtained on good grades of clean cast iron.

The electrode works well on AC and DC machines. Reverse polarity results in a smoother bead, deeper penetration, and a flatter weld which works well in deep seams. Straight polarity results in less penetration. The build-up of beads is higher with less spread into the fusion zone. Both polarities have their advantages. Reverse polarity should be employed on heavy material and deep seams, and straight polarity on light material.

Tensile strength is 60,000 pounds per square inch and yield point, 50,000.

3—Lubricant

Carbide and Carbon Chemicals Corporation, New York, announces a new internal combustion engine lubricant which is claimed to have marked advantages in cold weather.

The lubricant can be manufactured to any desired viscosity and is wax-free. Pour-points vary from —30 to —80° F. Flash points range from 300° F. up. The new materials have densities approximating that of water. Carbon residue values are less than .01 percent, regardless of viscosity. The lubricant is characterized by low change of viscosity with change in temperature, having viscosity indices in the range of 140 to 160.

These compounds are manufactured in two types, water soluble and water insoluble. The latter type is used for lubricating internal combustion engines. Other applications include lubrication of refrigerating machines and all kinds of machinery operated under conditions of low temperature or where a non-sludging oil is required.

4—Liquid Inflation

Goodyear Tire & Rubber Company, Akron, Ohio, announces that liquid inflation may be used in place of air for certain types of industrial equipment such as road graders, power mowers and industrial tractors.

Solution 100, developed after extensive tests, is replacing air in tires which carry only the weight of the vehicle and travel at relatively slow speeds.

In such service, it is claimed that use of the solution assures increased traction, constant inflation pressure, and in grader tires reduces "chattering" of the blade.

Use of liquid inflation is not recommended for load-carrying tires of trucks, cranes, trailers and earth moving vehicles. Increases in internal pressure occur in tires filled with liquid solution in cases where payloads are carried. Speed excess of 10 miles per hour may cause excessive strains due to increased centrifugal force.

Use This Convenient Coupon for Additional Information

Check below the numbers identifying items on which you want additional information. Mail coupon to The Oil Weekly and your request will be forwarded to the manufacturer.

THE OIL WEEKLY
P. O. Box 2608, Houston 1, Texas, U.S.A.

Please have manufacturers send me, without obligation, more information on items shown in July 30 issue of The Oil Weekly as checked below:

1 2 3 4 5 6 7 8 9 10 11 12
13 14 15 16 17 18 19 20 21 22 23 24

In addition to information checked above, I would like more data on products or services advertised elsewhere in this issue by_____ Company

Name_____ Title_____

Company_____

Address or P. O. Box_____

City_____ State_____

(To avoid delay print or type clearly name, company and mailing address)

5—Brazing Carbide Tips

Newcomer Products, Latrobe, Pennsylvania, has developed a new method of brazing cemented carbide tips to tool shanks which the manufacturer claims will prevent the cracking of the carbide

Upper half shows cracked carbide tip; Lower half shows tip brazed.

tip, and at the same time permit heavier cuts and longer tool life. This new method can be applied regardless of the make or grade of carbide.

Carbides, being extremely hard, are low in tensile strength. Therefore, it became necessary to develop a method of brazing the tips to tool shanks which would not leave the tip under a brazing strain. This inherent strain is caused by the steel (or cast iron) shank contracting approximately twice as much as the carbide after the brazing material has frozen. As a result, the strain thus created manifests itself in the forms of cracks developing near the parallel to the braze during grinding or as cracks through the length or width of the tip when subject to the strain and thermal shock of normal cutting.

6—Motor Starter

The Industrial Control Division, General Electric Company, Schenectady, New York, has perfected an a-c magnetic reversing starter featuring a semi-interference-type mechanical interlock. Available in sizes 0 and 1, the new starter is designed for full-voltage starting of squirrel-cage induction motors, although it can easily be used for reversing service when combined with a reduced voltage starter.

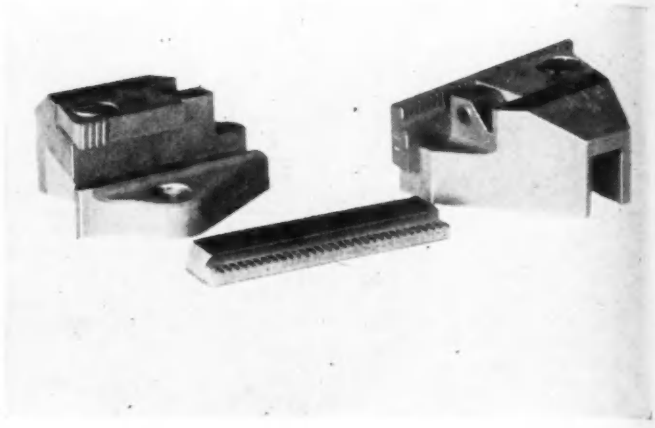
Easy to adjust, the new semi-interference-type mechanical interlock prevents the closing of one contactor while an arc is maintained on the other, thus averting a short circuit through the arc and the resultant burned contacts and blown fuses. In addition, the interlock arm of the closing contactor assists the interlock arm of the opening contactor in reaching its fully opened position. These interlock arms are case-hardened and their underside faces are buffed and polished to provide long life.

7—Chaser and Chaser Holder

Landis Machine Company, Waynesboro, Pennsylvania, has developed a new type chaser and chaser holder, known as the Lanrac, for thread cutting machines.

This device employs a rack tooth arrangement to quickly locate the chaser in its approximate position. The chaser has rack teeth milled for its full length on the offset seating surface, and likewise rack teeth are milled on the chaser clamp at the end nearest the chaser cutting edge. When interchanging chasers, the chaser is placed on the holder in its approximate position and clamped lightly. An adjusting screw which engages the back end of the chaser clamp is then employed to advance the chaser and chaser clamp as a unit to the exact position. Elongated slots in the chaser clamp permit sufficient lateral movement of the clamp slightly greater than the pitch of the rack.

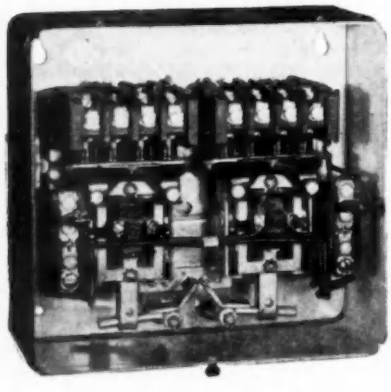
Heretofore a plain clamp has been employed to engage the dove-tail seating surface of the chaser, the chaser being backed up by an adjusting screw so located in a tapped hole in the chaser holder as to engage the corner of the chaser at the back seating surface. This arrangement made it necessary to back up the adjusting screw as much as 2½ or 3 inches, on some sizes of heads, when a long chaser was used to replace a short dull chaser. With the new clamping arrangement it is not necessary to adjust the screw more than two or three turns at any time thus saving considerable time in interchanging chasers.



Use the Coupon

For free copies of Manufacturers' Literature or more information on products described on these pages, use the convenient mailing coupon on page 109.

Other features incorporated are under-voltage protection when used with a push-button station or other momentary pilot-circuit device; undervoltage release when used with selector or limit switches; and tamperproof, self-contained overload relays which allow the



motor to operate up to its maximum safe temperature before tripping it off the line. The starter is housed in a sturdy metal encloser 9⅞x13⅝x4-9/16 in size, equipped with a hook-on cover, finished with smoothly rounded corners.

8—Self-Loading Trailer

W. C. Nabors Company, Mansfield, Louisiana, has developed a tandem axle self-loading machinery trailer recommended for the severest oil field service. A heavy-duty platform with an 18-inch pressed channel outer frame is augmented by an I-Beam under the frame. The front end is rolled and equipped with a lifting cable. The rear rolling tail pipe is Timken roller bearing suspended and facilitates winching and loading over the rear.

The tandem suspension affords independent wheel action.

9—Coupling

E. B. Wiggins Oil Tool Company, Los Angeles, announces a direct-connect coupling for use in testing operations.

The coupling fits over the end of any standard type and 10056 nipple, the "dogs" of the coupling gripping securely in the undercut just behind the threads of the nipple.

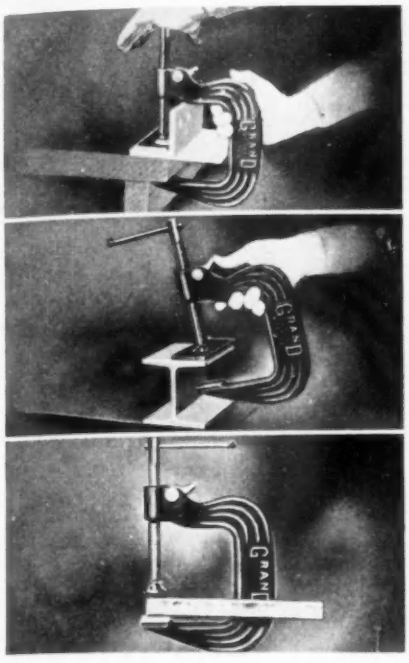
The coupling is made of durable, light aluminum. It fits all standard type AN nipples, and comes in sizes from ¼ to ¾ inches. Applications are varied and include testing of metering gauges, valve gauges and hydraulic equipment.

10—Speed Clamp

Grand Specialties Company, Chicago, announces a new line of extra-deep throat speed clamps.

It is claimed that the clamp can be positioned instantly by pushing down on

the ratchet screw and tightening with a turn of the loose-proof handle. The clamp releases instantly by loosening the handle and pushing with the thumb or finger on the trigger release pawl. This



frees the ratchet screw so the clamp is ready immediately for application.

Designed to hold firm on any surface, slanting or irregular, the clamp is equipped with replacable and socket swivel to prevent shifting or creeping. The trigger release pawl has hardened teeth which hold a meshed grip under spring tension on the ratchet screw while the clamp is set.

The clamp comes in three sizes, 4¾-inch opening with 4¼-inch throat; 6¾-inch opening with 4¾-inch throat; and 8¾-inch opening with 6-inch throat.

11—Barrel Stand

Henry H. Paris, Houston, announces the Western safety barrel stand de-

signed to afford safety and ease in handling barrels of liquid.

The stand is adjustable to fit the diameter and length of 50 and 55 gallon barrels in common use. Its flexible band with a notched binder locks tightly around the barrel to prevent slipping or tilting. The upright member of the stand pivots on the base when the latch lever is released, permitting it to move forward and downward until the band is in position to be locked around the barrel. After the band has been secured, the member is pushed into upright position with the barrel, where the latch lever automatically locks and holds it vertical.

Design of the stand is said to permit dispensing of liquids with a minimum of effort. The barrel is well balanced, and with the convenient tilting lever attached to the trunnion pin on the outside of one leg of the frame, it can be tilted to any angle or revolved. The tilting lever can be latched with the barrel in vertical, horizontal or approximately 90 degree angle positions.

After each dispensing, the barrel can be locked in vertical position, preventing leakage through the outlet valve. It also can be tilted forward to drain all contents.

The stand is all-steel construction, welded throughout. The base is of heavy channel iron and the upright members are two-inch steel pipe. It can be moved or skidded easily.

Literature

12—Insulations

Baldwin-Hill Company, Trenton 1, New Jersey, has issued a 28-page industrial catalog describing in detail the various high and low temperature mineral wool insulations made by the company. The booklet is fully illustrated and complete with applications specifications, conductivity curves and engineering data.

13—Wire Rope

A. Leschen & Sons Rope Company, St. Louis, Missouri, has issued Catalog OG20, on wire rope for the oil and gas fields. The publication is a complete manual on wire rope, including a discussion of the manufacture, lubrication, specifications, proper handling and splicing and attaching thimbles methods of binding ends, attaching sockets, clips, and recommended pratcice for the field care and use of wire rope. The catalog is bound in a durable cover, spiral form, and is pocket size.

14—Precision Equipment

Precision Equipment Company, Chicago, published industrial buyers' bulletin listing equipment ordinarily difficult to obtain. The booklet is designed to acquaint industrials with various types of equipment available for improving production, inspection and research facilities. Items includes steel tool room units, fans, slide rules, micrometers, counting scales, time switches, inverters, grinding tools, tool chests and wire strippers.

15—Automotive Products

Wagner Electric Corporation, St. Louis, Missouri, has issued a 16-page folder (form GU-86) describing its motors transformers, industrial brakes and controls, hydraulic brakes, air brakes, tachographs (speed-recording speedometers), NoRoL, brake lining, and brake-service tools.

16—Shovels, Draglines

Bucyrus-Erie Company, South Milwaukee, Wisconsin, has published the second in a series of booklets on its war production. "In War and Peace Progress Starts with Excavation" is the title of the booklet which presents the "shovel story" in graphic style with photographs of ⅜ to 2½ yard shovels, draglines, and cranes.

The booklet also shows how progress in the postwar period must start with excavation and tells something of what may be expected from the company in the future.

17—Rotary Drilling Machines

Franks Manufacturing Corporation, Tulsa, has published bulletins on its improved models SAL-5000 and SAL-6000 skid type rotary drilling machines.

These bulletins are the first of a series on new drilling and servicing equipment. In book form, the bulletins feature photographs, descriptions, capacities and specifications of each unit.

18—Regulator

The Hagan Corporation, Pittsburgh, has issued Bulletin 1145 on its Type SO Regulator for the control of suction, pressure or flow in any gas or air flow system. A feature of this booklet is a cutaway wash drawing of the regulator in four colors that shows its operation.

Shreveport Company Is Named Le Roi Engines Distributor

Le Roi Company, Milwaukee, Wisconsin, announces the appointment of The Ingersoll Corporation, Shreveport, as its engine distributors in the southern counties of Arkansas, all of Mississippi and the upper two-thirds of Louisiana.

The Ingersoll Corporation, under the direction of G. F. Ingersoll, has been active in the sales and service of heavy-duty gas, gasoline, and butane engines since 1937.

Jones, Laughlin Opens Store

Jones and Laughlin Supply Company has opened a store at Crescent, Oklahoma, with Fred Bozeman, formerly of Russell, Kansas, as store manager. H. D. Witt, formerly at Perry, Oklahoma, will be connected with the new store. Crescent is in the Northern Oklahoma district of the Jones and Laughlin Supply Company under district sales manager A. A. Hopper of Bartlesville, Oklahoma.

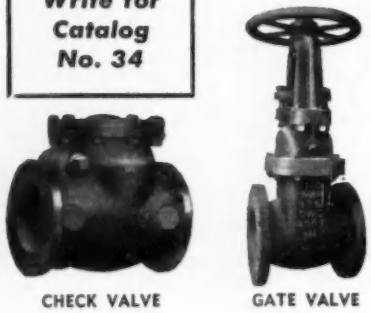
Warehouse Opened

Southern Engine & Pump Company, Houston, announces the opening of a warehouse at 1306 Marilla Street, Dallas. Factory shipments permitting, stocks of engines, pumps and parts will be carried.

"Red Wheel"

VALVES, HYDRANTS

Write for Catalog No. 34

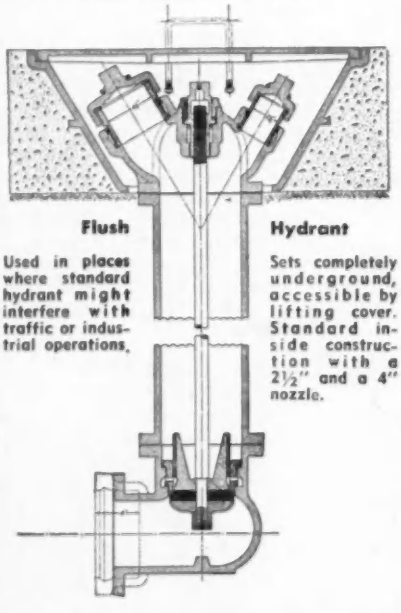


CHECK VALVE — GATE VALVE

M & H valves are used in the oil industry for water, gas, steam, oil, chemicals and are furnished in all commercial sizes from 2" to 30", inclusive. They are cast iron body, bronze mounted, furnished double disc parallel seat or solid wedge. They are heavily proportioned and have a high factor of safety.

OTHER M & H PRODUCTS

Fire Hydrants
Gate Valves
Tapping Valves
Special Castings
Tapping Sleeves
Check Valves
Floor Stands
Extension Stems
Mud Valves
Flap Valves
Sludge Shoes



Flush

Used in places where standard hydrant might interfere with traffic or industrial operations.

Hydrant

Sets completely underground, accessible by lifting cover. Standard inside construction with a 2½" and a 4" nozzle.

M&H VALVE
AND FITTINGS COMPANY
ANNISTON, ALABAMA

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There's little basis for comparison between an oil well and a piece of wire rope, save this: *both need a lot of technical knowledge to get results.*

In the EDWARDS factory, specialized knowledge is in everyday use, constantly being applied to make EDWARDS Wire Rope as strong, safe and long-lasting as is humanly possible. PREFORMED, like all EDWARDS Wire Rope, is really *engineered,* receiving constant tests and checks to make certain every inch of it measures up to our rigid standards of excellence.

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